
ARTICLES OF AGREEMENT

ENTERED INTO

IN CONNECTION WITH

THE

CANADIAN PACIFIC RAILWAY.

Printed by Order of Parliament.



OTTAWA :

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1880.

CANADIAN PACIFIC RAILWAY.

(19.)

ARTICLES of agreement entered into between the following contractors and Her Majesty Queen Victoria, represented by the Minister of Railways and Canals, in connection with the Canadian Pacific Railway, viz :—

John Ryan—to do the excavation, grading, bridging, track-laying, ballasting, station building, etc., on the Colonization Railway, North-Westerly from Winnipeg, Manitoba—about 100 miles.

Andrew Onderdonk—to do the excavation, grading, bridging, track-laying, ballasting, etc., from Emory's Bar to Boston Bar, British Columbia, about 29 miles (Section A).

Ryan, Goodwin & Co—to do the excavation, grading, ballasting, etc., between Boston Bar and Lytton, British Columbia, about 29 miles (Section B).

Andrew Onderdonk—to do the excavation, etc., required between Lytton and Junction Flat, about six miles above Spence's Bridge, on the River Thompson, B.C., about 28½ miles in length (Section C).

Andrew Onderdonk—to do the excavation, grading, bridging, track-laying, ballasting, etc., between Junction Flat and Savona's Ferry, British Columbia, about 40½ miles in length (Section D).

Miller Bros. and Mitchell—to supply 700 tons of railway spikes, delivered 400 tons at Fort William, and 300 tons at Montreal, for the Canadian Pacific Railway.

The Dominion Bolt Co—to supply 35 tons of fish-plate, bolts, and nuts, at Fort William, for the Canadian Pacific Railway.

The Correspondence, and also

The Agreement in connection with letting of the following contracts for the supply of 5,000 tons of steel rails and fastenings, etc., viz.: the West Cumberland Iron and Steel Co. (Limited) for 2,000 tons,—the Barrow Co. for 1,500 tons,—the Ebbw Vale Co. for 1,500 tons,—and the Patent Nut and Bolt Co. for 48 tons.

The Agreement with R. Dickson to erect Station Buildings, Pembina Branch, Canadian Pacific Railway, and also

The Agreement with Guest & Co. for 10,000 tons steel rails, etc.

The works to be done by the contractors, of which the hereto annexed are the specifications, consist of all the excavation, grading, bridging, track-laying, ballasting, station buildings, and other works required to be done on that portion of the Colonization Railway, commencing at Winnipeg, in the Province of Manitoba, and extending one hundred miles, or any shorter distance, north-westerly or westerly, that the Minister of Railways and Canals may determine.

So soon as the proposed line of railway or any portion thereof is built, the Dominion Government shall have the right for themselves, or for the contractors on adjoining portions of the main line or branches of the Canadian Pacific Railway, to use the whole or any part of the line herein contracted for, when and so soon as the Government rails are laid thereon.

No fencing is to be made under this contract, anything in the specifications or in the schedule of prices herein contained to the contrary notwithstanding. And only such portion of the ballasting as the said Minister may hereafter determine (not exceeding, however, one-half of the quantity originally contemplated to be done), is to be done and paid for under this contract.

(Signed) H. A. F.

B.

CANADIAN PACIFIC RAILWAY.

COLONIZATION LINE FROM WINNIPEG IN MANITOBA.

SPECIAL SPECIFICATION.

1. The Government has determined to construct a Colonization Railway to the west of Red River in Manitoba, and in order that delay may be avoided, it has been decided to invite tenders at once, the survey being in progress.

2. Commencing at Winnipeg, the railway will run north-westerly to connect with the main line in the neighborhood of the 4th base line, and thence run westerly between Portage La Prairie and Lake Manitoba, to a point 100 miles from Winnipeg, or for any shorter distance the Government may determine.

3. Whatever improvement the future may call for, the railway shall, in the first place, be of the cheapest description.

4. The survey not being made, and the precise location undetermined, it is not possible to furnish plans and profiles. Quantities are, however, assumed in order to give to intending contractors some idea of the work to be done, and to admit of a comparison of tenders. These quantities may, in actual execution, be diminished, and the contractors will be paid accordingly, but on no account must the assumed quantities be increased.

5. The ground over which the railway will pass, is for the most part level, and in many places the track may be laid almost directly on the natural surface of the prairie. At other places, a limited amount of grading will be required. The road-bed will be formed with a little light grading, the material being generally obtained from side-ditches. The road-bed will thus be formed to a width of fifteen feet, and except when crossing streams or depressions, to a height averaging six to twelve inches above the general prairie surface. The ditches will be made parallel to the railway, and they must, in no case, be formed nearer the centre line than 15 feet, except where sidings are required, when the distance will be increased to 30 feet, or such width as may be directed.

6. Timber structures for the crossing of ravines, and for passing water across the line of railway, will occasionally be required. These will be constructed according to

general drawings to be seen at the engineer's office, will be paid for by the cubic foot of timber erected in place and the weight of iron used. Where piling is required it will be paid for in the same way.

7. The line shall be fenced along the sides, except at public road crossings, where cattle-guards will be used. The fences, however, will properly conform to the position of the cattle-guards, as per drawings. The fence shall be the best description of common farm-fence used in the locality.

At all public roadways, cattle-guards will be established, and will be constructed according to drawings. The roadway between cattle-guards will be planked and the public road properly graded and gravelled as far as the limits of the railway right of way. Under this heading the bridging of side-ditches, fences from cattle-guards to the line fences of the railway, also post and sign and everything necessary to complete the crossing, will be embraced. The fences connecting cattle-guards with right-of-way fences will be post and board as per drawings.

9. Farm crossings will be established wherever required and directed. They will be graded so as to form easy and convenient passages for farm traffic across the rails, and planked to the full extent of the railway ties. The ditches will be properly bridged and gates of an approved design and with proper fastenings will be placed in the fences.

10. All the rails and fastenings will be handed over to the contractors at the ships' tackle at Montreal. They will be required to receive the material, carry it forward and place it on the line of railway in Manitoba, paying for harbor dues in Montreal, all handling, insurance, canal tolls, wharfage and all other charges by the way. The Government will make contracts to have the rails and fastenings delivered at Montreal, 5,000 tons by the 15th August, and the balance in October next.

11. The ties shall be equal in quality to those used on other portions of the Pacific Railway. See general specification.

12. The track-laying and ballasting shall be performed in accordance with the general specifications. The ballasting will be confined to one lift, giving six or eight inches under the ties.

13. Simple station buildings will be required at each station. These will be erected at points hereafter to be determined in accordance with the drawings and specification exhibited.

14. The general specification, dated 30th November, 1878, will be in force as far as applicable, and the contract to be executed shall be similar in its provisions to the form of indenture attached to the general specification.

15. A copy of the general specification and form of contract accompanies this, and will be supplied to all intending contractors on application. To these documents the attention of parties is specially directed.

16. Sealed tenders, endorsed "C. P. Railway Colonization Line," and addressed "F. Braun, Esquire, Secretary, Department of Railways and Canals, Ottawa," will be received at Ottawa until noon on Friday, the 1st August, 1879.

17. Tenders must be on the printed forms. These will be furnished on application at the Pacific Railway Offices in Ottawa and Winnipeg. *These forms alone are to be used.* Tenders must have the printed quantities correctly priced and accurately moneyed out, and no tender will be entertained unless an accepted bank cheque for \$3,000 be enclosed with it.

18. The printed quantities in the form of tender are not from any measurements—they are assumed maximum quantities. The contract will stipulate that while the work on completion may cost less than the total amount of the accepted tender, that amount shall not be exceeded.

19. To each tender must be attached the usual signatures of two responsible and solvent persons, residents of the Dominion, willing to become sureties for the carrying out of the conditions, as well as the performance of the works embraced in the contract.

20. The Government does not bind itself to accept the lowest or any tender.

21. So soon as a tender is accepted, the parties concerned must be prepared—immediately after being notified—to enter into contract, and for the due fulfilment of the same, will be required, by deposit of money or its equivalent value at current rates, of public securities or bank stocks to the amount of *five* per cent. on the bulk sum of the contract, of which the sum sent in with the tender will be considered a part.

22. The work must be commenced within one month after the acceptance of the tender and date of the contract. Fifty miles of the line must be in running order within eight months, and the whole length of line within twelve months, of the contract date.

SANDFORD FLEMING, ~~Esq.~~
Engineer-in-Chief.

CANADIAN PACIFIC RAILWAY OFFICE,
OTTAWA, 16th June, 1879.

(Signed) H. A. F.

A

CANADIAN PACIFIC RAILWAY.

GENERAL SPECIFICATION FOR THE CONSTRUCTION OF THE WORK.

[Applicable to all the following Railway Contracts, but not reprinted for each.]

1. This specification refers to all works of construction and materials required in making and building the railway up to *formation level*, and preparing it for the permanent way; comprising clearing, close cutting, grubbing, fencing, excavation, tunnelling, draining, ditching, foundation works, bridges, culverts. Also track-laying, ballasting, and all other works connected with the construction and completion of the line of railway, to which the engineer may consider this specification to be applicable under each contract.

CLEARING, ETC.

2. The clearing is embraced in the contract for the erection of the telegraph; but in the event of any clearing remaining to be executed, the contractor for grading may be required and directed to do it; a price for clearing is therefore necessary.

3. Where the railway passes through wooded sections, the land must be cleared to the width of sixty-six feet on each side of the centre line, or such greater or lesser width as the engineer may direct.

4. The clearing is to be done so that all the brush, logs and other loose material within its limits shall be burned. In no case shall any of the brush or logs be cast back upon the adjacent timber lands; they must invariably be made into piles near the centre of the space to be cleared, and there entirely consumed. All brush or trees accidentally or otherwise thrown into the adjacent woods, must be dragged out and burned. The land, when burned, must be left in a clean condition.

5. Where embankments are to be formed less than four feet, or more than two feet in height, all the standing timber and stumps must be chopped close to the ground, within the limits of the embankment, and burned.

6. Where excavations will not exceed three feet in depth, or embankments two feet in height, all stumps must be grubbed out, and, if possible, burned; those that will not burn, must be carried beyond the limits of the cuttings and embankments, where directed, and there piled. Directions will be given at the proper time, as to the extent of ground required to be cleared, close-cut and grubbed. The side-ditches and off-take drains must also be grubbed, but no grubbing will be paid for in borrowing pits.

FENCING.

7. The fence, wherever required, shall be a strong, well-built, heavy farm fence of approved design, thoroughly secured by stakes, riders, posts and yokes, or other means to prevent its removal by gales of wind or animals.

8. The farm gates, when required, will be light and strong, of an approved design, similar to those on the Intercolonial Railway.

9. The fencing to be thoroughly completed through all the cleared lands and wherever it may be directed to be placed by the engineer.

GRADING.

10. In woodland the grading will be commenced after the clearing, close cutting and grubbing required is completed to the satisfaction of the engineer, and the contractor will be held responsible for all damage to crops.

11. The width of embankments at sub-grade or formation level will be 17 feet. The width of cuttings will not be less than 22 feet. The slopes of earth work will be made one and a-half horizontal to one perpendicular. In rock cuttings the slopes will be, as a rule, one horizontal to four perpendicular. In cutting, partly earth and partly rock, a berme of six feet shall be left on the surface of the rock. The widths, slopes and other dimensions above defined may be varied by the engineer at any time to suit circumstances. And the contractor shall not take out nor be paid for rock, nor any other excavation beyond the slopes, without an express order, in writing, from the engineer. In the event of a slide in a rock cutting after it is formed, the contractor will remove the debris, and be paid for it as loose rock or as earth, according to the class to which it may appear to the engineer to belong.

12. The material to be placed in the embankments must be approved by the engineer, and in places where the natural surface of the ground upon which the embankment is to rest is covered with vegetable matter, which cannot be burned off in clearing, and which would, in the opinion of the engineer, impair the work, the same must be removed to his entire satisfaction. In the event of the line crossing muskogs or morasses, it may be deemed by the engineer expedient that a platform of logs shall be formed under the embankment of such width as will extend through and to about six feet beyond the side slopes, and of such depth as may be required, according to height of embankment. The logs to range six inches to fifteen inches diameter, and must be laid close together and covered with brush. All sloping ground covered with pasture shall be deeply ploughed over the base of the embankments before the latter are commenced.

13. In level prairie sections it will be necessary to excavate off-take ditches considerable distances to the right or left of the line. These ditches will generally be required in the lowest ground, where the material is frequently of a tough nature (locally known by the name of "Gumbo"). These off-take ditches must be of such widths and depths as may be required and directed. The sides shall be sloped one vertical to two horizontal, and the material shall be cast out so as to leave a berme of at least six feet between the deposit and the top of the slopes. A separate price for off-take ditches will be required in the tenders, and the quantities shall embrace all excavation in connection therewith, beyond the limits of the railway land.

14. Side-hill ground to be covered by embankment shall first be thoroughly underdrained as the engineer may see expedient, and all cuttings after being formed, and all slopes likely to be affected by wet must be similarly underdrained, longitudinally or transversely, or both, as circumstances may seem to him to require. These drains will be constructed in a similar way to that in which ordinary land drains are sometimes made; a trench will first be dug to a minimum depth of four feet, and in the bottom of this trench, four or five cedar or spruce poles about two inches in diameter will first be laid by hand, breaking joint; over the poles will then be placed not less than three feet of small broken stone, not larger than ordinary road metal or good gravel ballast, over which will be deposited such material convenient to the

place as the engineer may approve of. The contractor must find all the material required in these drains, do all the work described, and remove the surplus earth. These drains must always be made with a sufficient longitudinal fall for the easy flow of water, and, therefore, they may, in level cuttings, be deeper at one end than at the other, but the minimum depth will be not less than four feet.

15. On the completion of the cuttings and the under drains provided for in last clause, ditches for the removal of surface water shall be formed along each side at the bottom of the slopes, according to directions to be given. Catch-water ditches shall also be formed some distance back from the top of slopes, to exclude from the excavation any water flowing from the adjoining lands; the contractor shall also construct all other drains and ditches which the engineer may deem necessary for the perfect drainage of the railway and works.

16. All open ditches in cuttings or elsewhere other than those referred to in Clause 13, and all excavations required for turning, making or changing watercourses, and which must be executed as may from time to time be directed, will be measured up and paid for as excavation according to its class, and all other excavations such as may be required in the formation of public roads, or in borrowing pits, or in grading depot grounds, turnouts or branches, and so much of ordinary foundation pits for bridges and culverts as are not under the level of the water, shall be considered as a necessary part of the excavation for the formation of the roadway, and must be executed and the material deposited according to the directions of the engineer, and will be paid for at the same rate per yard as the ordinary excavation, according to its denomination. In ordinary foundation pits, where pumping or baling becomes necessary, all the excavation under water level shall be measured and reckoned at three times the price of earth excavation in order to cover the extra cost involved.

17. Excavation will be classed under three heads, viz.: solid rock, loose rock, and earth, and will be paid for according to the following definitions:—

1st. All stones and boulders measuring more than 27 cubic feet, and all solid quarry rock, shall be termed solid rock excavation.

2nd. All large stones and boulders measuring less than 27 cubic feet, and all loose rock, whether in situ or otherwise, that may be removed with facility by hand, pick or bar, without the necessity of blasting, shall be termed loose rock excavation.

3rd. All other excavation of whatever kind, with the exception of off-take ditches referred to in clause 13, shall be termed earth excavation.

18. The contract price for these several classes of excavation shall be taken to include the whole cost of hauling, except only extreme cases which may involve a haul of more than twelve hundred feet. For every hundred feet of haul over twelve hundred feet and up to twenty-five hundred feet, the contractor will be allowed at the rate of one cent per cubic yard, that is to say in the event of the haul being in any case twenty-five hundred feet, thirteen cents per yard shall be added to the schedule rate; which will be the maximum allowance per haul in any case. This clause shall not apply to ballast.

19. The embankments must be made to such sufficient height and width as will allow for the subsidence of the same, and both cuttings and embankments shall be left at the completion of the contract, at such heights, levels, widths and forms as directed by the engineer, the upper surface of the banks to be rounded in order to throw off the water.

20. The whole of the grading shall be carefully formed to the levels given, and the roadway in cuttings shall invariably be rounded and left from six to eight inches lower at the sides than on the centre line. In rock cuttings it will be sufficient to form a water channel about two feet wide and eight inches deep along each side. All materials found in excavations, whether in road-bed cuttings, ditches, water channels, road crossings, borrowing pits or elsewhere, must be deposited in such places as the engineer may direct. In case where the road-bed excavations are insufficient to form the embankments, the deficiency shall be supplied by widening the cuttings, or from the sides of the road, or from borrowing pits, but no material shall be so supplied

without his concurrence, and not until the cuttings are completed, without his express sanction. All borrowing pits shall, if required by the engineer, be dressed to a good shape and properly drained. Where material to make up embankments is taken from the side, a berm of at least ten feet from bottom of slope of embankment shall remain untouched.

21. Where the excavation in a cutting exceeds what may be required to make the embankments of the specified width, the engineer may direct that the embankments be increased in width with the surplus material, and when this is done to his satisfaction, the remainder, if any, may be wasted; but in every case where either borrowing or wasting is resorted to, the materials must be taken and deposited as he may regulate and direct.

22. In cases where pitching or rip-rapping will be required for the protection of embankments contiguous to streams, all stone suitable for this work found in excavations may be removed and deposited in some convenient place until required, and all good building stone which may be found in rock excavations may, with the approval of the engineer, be preserved and piled along the side of the line as directed. But any material so found and used will not be paid for twice, the quantity, if considerable, will form a deduction from the quantity of excavation so measured in the cutting.

23. Rip-rap work, whenever required and ordered for the protection of slopes of embankments, must be well and carefully performed, in such manner and of such thickness as may be directed. It will be measured and paid for by the cubic yard.

24. Roads constructed to and from any point on the line of railway for the convenience of the contractor, for the conveyance of material or otherwise, must be at his own risk, cost and charges, but the contractor will not be required to purchase land for the railway track, for branches or for borrowing pits.

25. Wherever the line is intersected by public or private roads, the contractor must keep open at his own cost convenient passing places, and he shall be held responsible for keeping all crossings, during the progress of the works, in such condition as will enable the public to use them with perfect safety, and such as will give rise to no just ground for complaint. Contractors will be held liable for any damages resulting from negligence on their part or that of their men. At all public roads crossed on the level, the contractor will be required to put in two substantial cattle guards of wood of such dimensions as may be directed by the engineer.

26. Whenever any material is met with in the excavations, which the engineer shall consider suitable and required for ballast, the same shall at his discretion be reserved for that purpose.

27. When slips occur in cuttings, after they are properly formed, the material must be immediately removed by the contractor, the slopes re-formed, and such precautions adopted as the engineer may deem necessary. The contractor will be paid for the removal of slips as already provided for.

28. In the event of earth excavation being proceeded with in winter, no snow or ice must be placed in embankments, or allowed to be covered up in them, and all frozen earth must, as far as practicable, be excluded from the heart of embankments.

29. The contractor shall, before the work is finally accepted, finish up cuttings and embankments, dress and drain borrowing pits when required, dress slopes to the required angles, repair all damages by frost or other causes, and complete everything connected with the grading of the road-bed, bridging, etc., in a creditable and workmanlike manner, in accordance with the directions and to the satisfaction of the engineer.

30. The measurement of quantities shall invariably be made in excavation unless in special cases, if any, where this may be found impossible; in such cases the engineer shall determine the quantities in embankment, after making all proper allowances, of which he shall be the judge.

31. The prices stipulated for excavation of the several denominations, together with the price for haul in extreme cases, and the price for work in foundation pits under water level, shall be the total prices for excavating, loading, removing and de-

positing all the material. In a word, the rates and prices stipulated in the contract must be understood to cover every contingency; the furnishing of all labor, material, power and plant; the cost of finishing up cuttings and embankments, the dressing and draining of bogrowing pits, when required; the dressing of slopes to the required angle, and the completing of everything connected with the grading of road-bed, in a creditable and workmanlike manner, in accordance with the directions and to the satisfaction of the engineer.

TUNNELLING.

32. The tunnelling will consist of "line tunnels" and "stream tunnels"; the former shall be formed to an exact minimum section hereafter to be furnished. For the purpose of tendering, the sectional area of "line tunnels" shall be calculated at 405 superficial feet, equal to 15 cubic yards to the lineal foot of tunnel. The "stream tunnels," where formed, shall be driven through the solid rock, which, in some places, forms the sides of ravines, they must be formed in the manner to be pointed out in each case. Open cuttings at the end will be excavated, to give an easy flow to the water; these open cuttings may be slightly curved, but the tunnels proper must be perfectly straight from end to end, with the sides as smooth as practicable. The up-stream in each tunnel must generally be one foot lower than the bed of the stream, opposite, and they must be driven with a proper inclination. Care must be taken to leave a solid pillar of rock between the tunnel and the side of the ravine, equal (except in special cases) to not less than double the diameter of the tunnel. The thickness of solid rock over the tunnel shall be similarly proportioned. The open cuttings which form the outlets and inlets of tunnels shall be measured and paid as ordinary excavation, according to classification, the material excavated from them to be placed in the embankments, or as may be directed. The tunnels shall be paid for by the lineal foot, and the price must cover all cost of pumping, bailing, draining, &c., which may be necessary. The tunnels required will be of the following dimensions:—

Sectional Areas.			Lineal Foot of Tunnel.		
Twenty feet tunnels, 324 superficial feet equals 12 cubic yards.					
Sixteen feet	do	216	"	8	"
Twelve feet	do	108	"	4	"
Eight feet	do	54	"	2	"
Six feet	do	27	"	1	"

TIMBER STRUCTURE.

33. The structures for the passage of small streams may be built of the most suitable wood to be found in the country. Character and quality to be approved by the engineer. The several structures are intended to be built according to the following specification and the drawings referred to; but the character of the designs may be changed to suit circumstances.

34. General drawings No. 1 to 9, inclusive, show the kind of structures to be erected for the passage of the smaller streams under the railway.

Drawing No. 1, for embankments 2 feet high					
"	No. 2	"	4	"	
"	No. 3	"	6	"	
"	No. 4	"	8	"	
"	No. 5	"	10	"	
"	No. 6	"	15	"	
"	No. 7	"	20	"	
"	No. 8	"	25	"	
"	No. 9	"	30	"	

35. No. 1 will be composed of two bents framed together in the manner shown in the drawing, having caps and mud-sills framed into posts and braces, and pinned as shown. These bents will be placed in trenches—previously excavated—11 feet

centre to centre, and at least five feet in the ground, and when properly levelled as to grade, height, &c., the earth will then be firmly packed around them. These bents will be spanned by stringers 16 inches by 12 inches, and bolted by $\frac{7}{8}$ -inch bolts—with washers—to the caps. The bank stringers will be 12 inches by 12 inches. The whole then covered by ties 9 inches by 8, and of the lengths shown on the plan.

36. No. 2 will be similar in every respect to No. 1, except as to height of bents. See drawing.

37. No. 3 will be composed of four bents; each bent will have cap and mud sill 12 inches by 12 inches, and four posts 12 inches by 12 inches, and two braces 12 inches by 12 inches, all framed together and pinned in the manner shown. There will be two diagonal braces of 9 inches by 6 inches placed in each bent in the manner shown, and bolted to the frames by $\frac{7}{8}$ -inch bolts, with washers under the heads, and nuts of bolts; seven bolts to each brace. Trenches will be dug for the reception of these bents 11 feet centre to centre, and 5 feet deep; and when the bents have been levelled up to grade height and placed in line, the earth will then be tramped firmly around them. Stringers of 16 inches by 12 inches must be provided and bolted to cap by $\frac{7}{8}$ -inch iron bolts with washers. The bank stringers will be 12 inches by 12 inches; the whole structure will then be covered with special ties 9 inches by 8 inches as shown.

38. Nos. 4 to 9 will be similar to No. 3 already described. No. 6 will have six bents, No. 7 eight bents, No. 8 eight bents; and No. 9 ten bents, and they will increase in height according to the height of the bank. In cases where stringers cannot be procured long enough to span the entire number of bents, as in the cases of Nos. 6, 7, 8 and 9, then the stringers may be joined either by butt joint on corbells resting on caps, or be allowed to overlap each other on caps, all being firmly bolted to caps.

39. Wherever the circumstances of the case require the adoption of trestle-work in lieu of embankments, the same shall be erected in the most substantial manner, in accordance with the plans and specifications of the same to be furnished from time to time by the engineer.

40. Wherever the circumstance of the case require the adoption of bridges on piles, they will be erected according to the following, or another approved plan. Trenches will first be excavated 21 feet centre to centre, and to the depth of the beds of the streams. Each bent will be composed of 4 piles, driven perpendicularly, together with 2 spur piles, as shown in the drawing. The piles are to measure at the butt or larger end not less than 12 nor more than 17 inches in diameter, exclusive of bark. They must be perfectly sound and straight, and be of such lengths as circumstances may require. The piles must be driven by a hammer weighing 1,500 lbs. or upwards, until they reach perfectly firm ground. They will generally be tested by the hammer falling 30 feet at the last blow. Care must be taken to have them driven truly, so that the caps, walling pieces, and braces may be properly framed and bolted to them. The spur piles must be curve-pointed, so that as they are driven they will gradually come into their places and butt against the piles and be bolted to the same, with two bolts to each spur pile. Before being driven the piles must be sawed or chopped off square at the butt, and tapered to a blunt point at the smaller end. Should there appear to be any danger of splitting, the heads must be bound with iron hoops, and if necessary the points must also be properly shod. The stringers must be double, 12 inches by 16 inches, bolted together and resting on corbells, and be bolted securely to corbells and caps. The stringers must be of as long lengths as possible, and to break joint alternately inside and out. The bank stringers will be 16 inches by 12 inches. The whole to be covered by special ties 9 inches by 8 inches as shown.

41. The railway will be carried over the larger streams by bridges. The abutments and piers will, in some cases, be built of crib-work filled with stone. The cribs must be constructed in the most substantial manner of the most suitable timber to be found in the vicinity; outside timbers to be not less than 12 inches square, dove-tailed at the angles, and properly pinned with hardwood pins or rag-bolts of

iron, as the engineer may direct; the ties may be suitable round timber, dove-tailed into face timbers and pinned. The sloping faces of the cut-waters to piers must be of square timber laid with one side in the line of the rake of the cut-water, and be dove-tailed at angles; the two faces of the cut-waters will then be sheathed with hard-wood plank 3 inches thick, well fastened to the crib-work with spikes or rag-bolts. The whole of the abutments, and piers to be finished in accordance with the plans, and to the satisfaction of the engineer.

42. Where the circumstances of the case require the adoption of timber bridges, their superstructure will be of the most improved Howe truss pattern, built of pine with white oak keys, cast iron prisms, and wrought iron rods, with upset ends, the whole to be first-class material and workmanship. Detail drawings will be prepared during the progress of the work by the engineer, to suit each span or bridge, and to which the contractor must work. These bridges must be executed in a thoroughly substantial and workmanlike manner, and shall be completed in every respect, except painting, which will not be included in the present contract.

43. The Government reserves the right to substitute and furnish iron superstructures for bridges in lieu of timber, and to take such steps as may be deemed best for placing the same in position. In the event of this right being exercised after the contractor has incurred expense in procuring some of the timber, he shall not be entitled to any compensation on account of the substitution beyond the value of the material furnished and the labor expended thereon.

FOUNDATIONS.

44. Foundation pits must be sunk to such depths as the engineer may deem proper for the safety and permanency of the structure to be erected; they must in all cases be sunk to such depths as will prevent the structures being acted on by the frost. The material excavated therefrom to be deposited in embankment, unless the engineer directs otherwise. For ordinary foundations, the 16th clause is referred to. In the case of piers in large rivers or lakes, a special price must be given in the tender for coffer dams and all extra expense involved.

MASONRY.

45. In order to prevent delay it will be expedient generally to build the structures in the first place of timber, but should it be practicable to insert structures of masonry at one or more places without interfering with the progress of the work, and it appears expedient to do so, the engineer may be authorized to substitute masonry for wooden structures. In such cases the work must be of a substantial and permanent character, and in every respect equal to the best description of masonry in railway works.

46. The masonry shall not be started at any point before the foundation has been properly prepared; nor until it has been examined and approved by the engineer, nor until the contractor has provided a sufficient quantity of proper materials and plant to enable the work to be proceeded with regularly and systematically.

47. The stone used in all masonry on the line of railway must be of a durable character, large, well proportioned and well adapted for the construction of substantial and permanent structures; parties tendering must satisfy themselves as to where fitting material for the masonry can be most conveniently procured.

48. Bridge masonry shall generally be in regular courses, of large, well-shaped stone, laid on their natural beds, the beds and vertical joints will be hammer-dressed, so as to form quarter-inch joints. The vertical joints will be dressed back square 9 inches, the beds will be dressed perfectly parallel throughout. The work will be left with the "quarry face" except the outside arrises, strings and coping, which will be chisel dressed.

49. The courses will not be less than twelve inches, and they will be arranged in preparing the plans to suit the nature of the quarries, courses may range up to 24 inches, and the thinnest courses invariably be placed towards the top of the work.

50. Headers will be built in every course not further apart than 6 feet, they will have a length in line of wall of not less than 24 inches, and they must run back at least three times their height, unless when the wall will not allow this proportion, in which case they will pass through from front to back. Stretchers will have a minimum length in line of wall of 30 inches, and their breadth of bed will at least be $1\frac{1}{2}$ times their height. The vertical joints in each course must be arranged so as to overlap those in the courses below 10 inches at least. The above dimensions are for minimum courses of 12 inches, the proportions will be the same for thicker courses.

51. The quoins of abutments, piers, &c., shall be of the best and largest stones, and have chisel drafts properly tooled on the upright arris, from two to six inches wide, according to the size and character of the structure.

52. Coping stones, string courses and cutwaters shall be neatly dressed in accordance with plans and directions to be furnished during the progress of the work.

53. The bed stones for girders shall be the best description of sound stone; free from dries or flaws of any kind, they must be not less than 12 inches in depth for the smaller bridges, and 8 feet superficial area on the bed. The larger bridges will require bed stones of proportionately greater weight; these stones shall be solidly and carefully placed in position, so that the bridge will sit fair on the middle of the stones.

54. The backing will consist of flat-bedded stone, well shaped, having an area of bed equal to four superficial feet or more. Except in high piers or abutments, two thicknesses of backing stone, but not more, will be allowed in each course, and their joints must not exceed that of the face work. In special cases, where deemed necessary by the engineer, to insure stability, the backing shall be in one thickness; the beds must, if necessary, be scabbled off, so as to give a solid bearing. No pinning will be admitted. Between the backing and face stones there must be a good square joint, not exceeding one inch in width, and the face stones must be scabbled off to allow this. In walls over three feet in thickness, headers will be built in front and back alternately, and great care must be taken in the arrangement of the joints so as to give perfect bond.

55. Culvert masonry shall be built of good, sound, large flat-bedded stones, laid in horizontal beds. It may be known as random, or broken coursed work. The stones employed in this class of masonry will generally be not less in area of bed than three superficial feet, nor less in thickness than eight inches, and they must be hammer-dressed so as to give good beds with half-inch joints. In smaller structures, and in cases where stones of good size and thickness cannot be had, they may, if in other respects suitable, be admitted as thin as five inches. All stones must be laid on their natural beds.

56. Headers shall be built in the wall, from front and back alternately, at least one in every five feet in line of wall, and frequently in the rise of wall. In the smallest structures headers shall not be less than twenty-four inches in length, and the minimum bed allowed for stretchers shall be twelve inches. In the larger structures all stones must be heavier in proportion. Every attention must be paid to produce a perfect bond, and to give the whole a strong, neat, workmanlike finish.

57. Wing walls will generally be finished with steps, formed of sound, durable stone, and not less than from 10 to 12 inches thick, and 6 feet superficial area; other walls will be covered with coping of a similar thickness, and of seven feet or upwards, superficial area. These coverings will be neatly dressed when required, and as may be directed. The walls of the box culverts will be finished with stones, the full thickness of wall, and the covers will be from 10 to 15 inches thick, according to the span, they must have a bearing of at least 12 inches on each wall, and they must be fitted sufficiently close together to prevent the earth from falling through.

58. Arches of 10 feet span and upwards will be constructed of stones cut so that when laid, their beds will radiate truly from the centre of the circle; the depth of stones will of course vary with the span, but will never exceed 30 inches; they must not be less in length than 27 inches and they must break joint ten inches; their

thickness on the soffit must be at least 9 inches, and will be dressed to the circle. All the stones must be dressed to the full depth of bed so as to give truly radiated joints from $\frac{1}{16}$ to $\frac{1}{4}$ inch, they must be set without pinning of any kind and the end joints must be properly squared. Each stone to be full bedded in cement, and each course afterwards thoroughly grouted. The outer ring stones to be neatly worked with a chisel draft around their edges.

59. Arches of 8 feet span and under shall be constructed of suitable flat-bedded stones ranging according to the span from 16 to 24 inches deep and with a minimum length of from 16 to 24 inches, and 5 to 6 inches in thickness on the soffit, they must invariably extend through the entire thickness of the arch. Each stone to be well and closely fitted so as to give half-inch joints and to break joints with its fellow 7 to 9 inches. The whole must be laid in thin mortar and each course must be well grouted immediately after being laid. The outer arch stones to be as nearly uniform in depth as possible, of large size and neatly incorporated with the perpendicular face of the masonry. The key stones to be 10 or 12 inches on the soffit, to have a chisel draft around their edges, and to project beyond the face of the wall 2 or 3 inches.

60. All arches shall be built in cement, and before being covered with earth or the centreing removed, they must be thoroughly flushed on the back, levelled up and rounded to a moderately even and smooth surface with the same material.

61. Centres of arches must in all cases be well formed, of ample strength, securely placed in position, and in every respect to the satisfaction of the engineer. The ribs must not be placed farther apart than three feet in any case. The laggings shall be cut to a scantling of three inches square. The supports of centres shall be substantial and well constructed, and they must be provided with proper wedges for easing centres when required.

62. Structures having more than one arch shall be provided with as many centres as the engineer may deem proper, and in no case shall the centres be struck without his sanction.

63. Centreing and scaffolding of all kinds shall be provided by the contractor, and the cost included in the price of masonry.

64. The bottoms of culverts will be paved with stones set on edge, to a moderately even face, packed solid, the interstices being also well packed. The paving will be from 12 to 16 inches deep.

65. Masonry shall be formed dry or laid in mortar as circumstances may determine. In dry masonry special regard must be paid to the stone being massive and well proportioned.

66. Mortar shall be of hydraulic lime or cement and common lime.

67. Hydraulic lime mortar will be used, unless otherwise directed, in building all masonry, from the foundations up to a line two feet above the ordinary level of the stream. It will be used also in turning arches, in laying girder beds, coping, covering of walls generally, in lipping and in pointing. The hydraulic lime or cement must be fresh ground, of the best brand, and it must be delivered on the ground, and kept till used in good order. Before being used, satisfactory proof must be afforded the engineer of its hydraulic properties, as no inferior cement will be allowed.

68. Common lime mortar must be made of the best common lime and will be employed in all masonry (except dry) where cement is not directed to be used.

69. Both cement and lime must be thoroughly incorporated with approved proportions of clean large-grained sharp sand. The general proportions may be one part of lime to two parts of sand, but this may be varied according to the quality of the lime or cement. Mortar will be only made as required, and it must be prepared and used under the immediate direction and to the satisfaction of an inspector, by the contractor's men, failing which the inspector may employ other men to prepare the mortar, and any expense incurred thereby shall be borne by the contractor. Grout shall be formed by adding a sufficient quantity of water to well tempered and well proportioned mortar.

70. When mortar is used every stone must be set in a full bed and beaten solid; the vertical joints must be flushed up solid, and every course must be perfectly level and thoroughly grouted.

71. In all walls built in common lime, the exposed faces will have a four-inch lipping of cement.

72. All masonry must be neatly and skilfully pointed, but if done out of season, or if from any other cause it may require re-pointing before the expiration of the contract, the contractor must make good and complete the same at his own cost. Work left unfinished in the autumn must be properly protected during the winter by the contractor, at his risk and cost.

73. A puddle-wall, at least 2 feet thick, extending from end to end of the masonry, and from the bottom to the top must be made between the back of the dry masonry and the embankment.

74. After the masonry of a structure has been completed for a period of four or five weeks, the formation of the embankment around it may be proceeded with. The earth must be carefully punned in thin layers around the walls, and in this manner the filling must be carried up simultaneously on both sides. The contractor must be extremely careful in forming the embankments around culverts and bridges, as he will be held liable for any damages to the structures that may arise. The punning must be carefully attended to, and the whole filling must invariably be done in uniform courses from the bottom to the top of the embankment, without loading one side of the masonry more than another.

TRACK-LAYING AND BALLASTING.

75. The work of track-laying and ballasting will embrace all engines, cars, and plant, (unless otherwise provided in the contract), and all labor and tools required for loading, unloading and distributing rails, joint-fastenings, spikes, points and crossings, and sleepers or cross-ties; laying, lifting, centreing, lining and surfacing the track; also, for making roads to ballast pits and laying all service tracks; for getting, loading and unloading the ballast, placing the same in the road bed and trimming it up. At the close of the contract any engines and platform cars which may be considered by the engineer fit for further use, may be transferred to the Government on the valuation of the engineer.

76. The Government will furnish to the contractor, rails, joint-fastenings, spikes, points and crossings, switch-gear, and switch-frames.

TRACK-LAYING.

77. The rails, joint-fastenings, spikes, points and crossings, switch gear and frames, will be delivered by the Government to the contractor at places to be indicated, from whence they shall be distributed by the contractor.

78. Track-laying shall include the supplying, furnishing and laying plank, including spikes for the same, on public and private road crossings, distributing rails, rail fastenings, spikes, points and crossings, ties, laying the same on main track and sidings, and centreing lining and surfacing. Track-laying will be paid for by the lineal mile of 5,280 feet.

79. The rails shall be laid to a gauge of 4 feet 8½ inches clear between the rails, and they shall be well and carefully fastened at the joints, which must be as near as possible opposite each other and on the same tie; special care must be taken at points and crossings to have the rails laid to a tight gauge, the rails must be full spiked, and on curves the outer rail shall be elevated (unless otherwise directed), according to the degree of curvature as follows, that is to say, on one degree curves 0.05 feet, on two degree curves 0.10 feet, on three degree curves 0.15 feet, and on four degree curves 0.20 feet. The rails shall be handled with great care, and before being run over by either engine or cars, shall be full sleepered and surfaced. Every precaution shall be taken to prevent them getting bent during the progress of the ballasting.

80. The sleepers or cross-ties must be of approved sound timber, smoothly hewn, free from all score hacks, and chopped or sawn square at the ends, 8 feet long, flatted on two opposite sides to a uniform thickness of 6 inches, the flatted surface being not-

less than 6 inches, on either side, at the small end. They must be placed as nearly as possible at uniform distances apart, and at right angles to the rails, in such a manner that about 25 per cent. of the length of the rail shall have a bearing upon the surface of the sleepers. "Joint-sleepers" must have both an upper and under surface bearing at their smallest end, of at least 8 inches.

81. When the sleepers are provided under a separate contract from the track-laying and ballasting, the contractor for the latter shall take delivery of them, in the position and at the points in which they are received by the Government inspectors.

82. The contractors shall lay all sidings and put in all points and crossings complete, embracing wing and jack rails, head blocks, switch and signal frames, and gearing.

83. The contractors shall remove from the track and straighten all bent and damaged rails, and make good all injuries done before the works are finally accepted; and further they will be held responsible for all materials provided them, and give a receipt for the same upon taking delivery.

BALLASTING.

84. The land for ballast pits and approaches thereto will be furnished by the Government and approved by the engineer; in selecting land for the purpose, a preference will always be given to those points where the best material can be procured having due regard to the convenience of the contractors. During the working of any pit, should the material be found unfit for ballasting, the engineer shall have power to compel the contractors to close such pits and open others.

85. The surface of ballast pits shall be stripped of soil where such exists, and no material whatever shall be placed on the road-bed but good clean gravel, free from earth, clay, loam, or loamy sand; no large stones shall be allowed. The maximum size of gravel must not be greater in diameter than three inches. In unloading the ballast, the train must be kept working to and fro so as to thoroughly mix the different qualities of ballast, until a sufficient quantity is deposited for the first "lift." The track must then be raised so that there will be an average depth of six inches beneath the sleepers, and the ballast must be well beaten and packed under and around them. As the raising proceeds the end of the lift shall extend over not less than three rail lengths, and before trains are allowed to pass over the inclined portion of track, it must be made sufficiently solid to prevent bending the rails, or twisting the rail-joints. After the lift, the track shall be centred, lined, topped, surfaced and trimmed off to a proper form and width.

86. In the event of full ballasting being required, a second "lift" must be made, in the same manner and with the same precautions as required for the first "lift," in order to secure a uniform thickness of 12 inches under the sleepers. In wet cuttings the engineer shall have power to direct a greater thickness of ballast, should it be deemed necessary.

87. Whenever the work is sufficiently advanced to admit of trains using the line for public traffic, it will be in the power of the Government to regulate the running of all trains, so as to ensure safety, and interfere as little as possible with the traffic.

88. The contractors shall keep all public and private road crossings in a safe and serviceable condition during the progress of the work, leaving them well and properly planked inside and outside of the rails, as may be directed by the engineer, and gravelled to a depth of at least 10 inches for a distance of 50 feet on both sides of the track.

89. The track shall be left by the contractors with everything complete, and well surfaced. The ballast shall be dressed off to the form required, and the whole shall be executed according to the direction and to the approval of the chief engineer, or other officer duly appointed.

90. The contractors shall be paid by the cubic yard for all ballast put into track, the measurement to be made in the pit or excavation, and the price per cubic yard to

cover the cost of laying tracks to the pit, stripping the ground, excavating, handling, hauling, putting the ballast on the road-bed, and neatly trimming it off to the proper form.

MISCELLANEOUS.

91. If any work or service be required to be done, which, in the opinion of the engineer, does not come within the class of work to be measured under the contract, he shall be at liberty to direct the contractor to perform the same by day's labor, and the contractor when required by him shall supply such force as the engineer may direct, and the contractor shall perform such work, and he shall be paid the reasonable and actual wages of such force, as ascertained by time-keeper and pay-sheet, together with fifteen per cent for the use of tools and profit. The engineer shall be at liberty to discharge any bad or unsuitable workmen who may be placed at day's labor work, and the work so performed shall be subject to his approval before payment thereof.

92. No tender will be entertained unless on one of the printed forms prepared for the purpose, and with the schedule of quantities therein correctly priced and accurately moneyed out; nor unless an accepted bank cheque, or other available security of such amount as may be required, accompanies the tender, which shall be forfeited if the party and sureties tendering decline or fail to enter into the contract for the works and Sureties' Indenture when called upon to do so, upon the tender being accepted. In the event of a tender not being accepted, the cheque or other security will be returned.

93. For the due fulfilment of the contract, satisfactory security will be required either by deposit of money, or its equivalent value at current rates of public securities, or bank stock, to the amount of five per cent. on the bulk sum of the contract, of which the sum sent in with the tender will be considered a part, or by such other security as the Minister of Public Works for the time being of the Dominion of Canada, may approve of, and all costs and expenses incurred in respect of any security offered by the contractor, whether in investigating the title of same, preparing instruments, obtaining valuation or otherwise, shall be paid by the contractor, whether such security be approved of or not.

94. To each tender must be attached the usual signatures of two responsible and solvent persons, residents of the Dominion, willing to become sureties for the carrying out of the contract.

95. The person or persons whose tender is accepted shall execute at once a contract under seal, similar in its provisions to the form of indenture hereto annexed, and it will be assumed that parties tendering have made themselves perfectly familiar with its contents; and further, may contain such special provisions as the Minister of Public Works for the Dominion of Canada may determine, and the surety or sureties for the contractor shall also execute at the same time an indenture similar in its provisions to the form of Sureties' Indenture annexed to said form of contract, and containing such special provisions as the said Minister may determine,

96. The works are to be commenced and proceeded with as soon as practicable after the person or persons whose "Tender" may be accepted, shall have entered into the contract.

SANDFORD FLEMING,

Engineer-in-Chief.

Canadian Pacific Railway Office,
Department of Public Works,
Ottawa, 30th November, 1878.

(Signed) H. A. F.

THIS INDENTURE, made the nineteenth day of August, one thousand eight hundred and seventy-nine, between JOHN RYAN, of Brockville, in the County of Leeds and Province of Ontario, Contractor, hereafter called "the Contractor," of the first part, and Her Majesty Queen Victoria, represented herein by the Minister of Railways and Canals, of the second part, WITNESSETH, that in consideration of the covenants and agreements on the part of Her Majesty hereinafter contained, the contractor covenants and agrees with Her Majesty as follows:—

Work.—Engineer.

1. In this contract the word "work" or "works" shall, unless the context require a different meaning, mean the whole of the work and the materials, matters and things required to be done, furnished and performed by the contractor under this contract. The word "engineer" shall mean the chief engineer for the time being having control over the work, and shall extend to and include any of his assistants acting under his instructions, and all instructions or directions, or certificates given, or decisions made by any one acting for the chief engineer, shall be subject to his approval, and may be cancelled, altered, modified and changed, as to him may seem fit.

On whom Binding.

2. All covenants and agreements herein contained shall be binding on and extend to the executors and administrators of the contractor, and shall extend to and be binding upon the successors of Her Majesty, and wherever in this contract Her Majesty is referred to, such reference shall include her successors, and wherever the contractor is referred to, such reference shall include his executors and administrators.

Labour, Plant and Material.—Time for Completion.

3 That the contractor will, at his own expense, provide all and every kind of labour, machinery and other plant, materials, articles and things whatsoever necessary for the due execution and completion of all and every the works set out or referred to in the general specifications hereunto annexed, dated 30th November, 1878, and marked A, and in the Special Specification also hereunto annexed, and marked B, and set out or referred to in the plans and drawings prepared and to be prepared for the purposes of the work, and will execute and fully complete the respective portions of such works and deliver the same complete to Her Majesty, on or before the dates following, that is to say, 50 miles thereof within eight months after the date of this contract, and the whole on or before the nineteenth day of August, A.D. one thousand eight hundred and eighty.

Materials and Workmanship.

The said work to be constructed of the best materials of their several kinds, and finished in the best and most workmanlike manner, in the manner required by and in strict conformity with the said specifications and drawings which may from time to time be furnished (which said specifications are hereby declared to be part of this contract), and to the complete satisfaction of the chief engineer for the time being having control over the work.

Omissions to be Made Good.

4. The aforesaid specifications and the several parts of this contract shall be taken together, to explain each other, and to make the whole consistent; and if it be found that anything has been omitted or mis-stated, which is necessary for the proper performance and completion of any part of the work contemplated, the contractor

will, at his own expense, execute the same as if it had been properly described, and the decision of the engineer shall be final as to any such error or omission, and the correction of any such error or omission shall not be deemed to be an addition to or deviation from the works hereby contracted for.

Engineer may order Extra Work and Make Changes.

5. The chief engineer, with the sanction of the Minister of Railways and Canals, shall be at liberty, at any time, either before the commencement or during the construction of the works or any portion thereof, to order any work to be done, and to make any changes which he may deem expedient in the grades, the width of cuttings and fillings, the dimensions, character, nature, location or position of the works, or any part or parts thereof, or in any other thing connected with the works, whether, or not, such changes diminish the work to be done, or the cost of doing the same, and the contractor shall immediately comply with all written requisitions of the engineer in that behalf, but the contractor shall not make any change in or addition to, or omission, or deviation from the works, unless directed by the engineer, and shall not be entitled to any payment for any change, addition or deviation, unless such change, addition, omission or deviation shall have been first directed in writing by the engineer, and notified to the contractor in writing, nor unless the price to be paid for any additional work, shall have been previously fixed by the Minister in writing, and the decision of the engineer as to whether any such change or deviation increases or diminishes the cost of the work, and as to the amount to be paid or deducted as the case may be in respect thereof, shall be final, and the obtaining of his certificate shall be a condition precedent to the right of the contractor to be paid therefor. If any such change or alteration constitutes, in the opinion of the said engineer, a deduction from the works, his decision as to the amount to be deducted on account thereof, shall be final and binding.

Changes shall not Invalidate Contract.

6. That all the clauses of this contract shall apply to any changes, additions or deviations, in like manner, and to the same extent, as to the works at present projected, and no changes, additions, deviations or variations shall annul or invalidate this contract.

Limit of Expenditure under this Contract.

7. It being the intention that the cost of the work to be done under this contract be limited to the sum of six hundred thousand five hundred dollars (\$600,500.00) of lawful money of Canada, which sum is to be taken as the maximum amount of this contract, not to be exceeded; it is hereby specially agreed that should it, at any time during the execution of the said work, appear from the cost of the work then performed, as compared with the value of the works still to be done, that such maximum amount will be exceeded, whether by reason of additions, alterations, variations, for any cause whatsoever, the contractor will then be required to complete only such portion of the works herein contemplated as will be indicated by the engineer, with the view to limit the total expenditure under this contract to the maximum above stated; and so soon as the said maximum amount will be expended, this contract will then be considered as ended, and the contractor will not thereafter be entitled to continue the works under this contract, or to receive any further payment beyond the said maximum amount, unless the Minister should authorize and direct further expenditure; in which case, it is understood that the Minister will have the right (which is hereby expressly reserved) to direct that any works, which may then remain to be done, shall be executed under this contract; and the contractor hereby agrees to execute the same at the rates or prices hereinafter mentioned, as if these remaining works formed part of this contract. Provided also, that in case the

said works, on completion, by reason of alterations, variations, deviations, diminutions, omissions, or otherwise, should not amount to the total sum above mentioned, the contractor will not be entitled to the payment of the difference in cost, whatsoever the same may be. No compensation shall, in any case, be claimable by the contractor for any loss of anticipated profits.

Engineer to be sole judge of Work, Material, &c.

8. That the engineer shall be the sole judge of work and material in respect of both quantity and quality, and his decision on all questions in dispute with regard to work or material, or as to the meaning or intention of this contract and the plans, specifications and drawings shall be final, and no works or extra or additional works or changes shall be deemed to have been executed, nor shall the contractor be entitled to payment for the same, unless the same shall have been executed to the satisfaction of the engineer, as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the contractor to be paid therefor.

Schedule of Prices.

9. It is hereby distinctly understood and agreed, that the respective portions of the works set out or referred to in the list or Schedule of Prices to be paid for the different kinds of work, include not merely the particular kind of work or materials mentioned in said list or schedule, but also all and every kind of work, labor, tools, and plant, materials, articles and things whatsoever necessary for the full execution and completing ready for use of the respective portions of the works to the satisfaction of the engineer. And in case of dispute as to what work, labor, materials, tools and plant are or are not so included, the decision of the engineer shall be final and conclusive.

Foreman.

10. A competent foreman is to be kept on the ground by the contractor during all the working hours, to receive the orders of the engineer, and should the person so appointed be deemed by the engineer incompetent, or conduct himself improperly, he may be discharged by the engineer, and another shall at once be appointed in his stead; such foreman shall be considered as the lawful representative of the contractor, and shall have full power to carry out all requisitions and instructions of the said engineer.

Unsuitable Material or Imperfect Work.

11. In case any material, or other things in the opinion of the engineer not in accordance with the said several parts of this contract, or not sufficiently sound or otherwise unsuitable for the respective works, be used for or brought to the intended works, or any part thereof, or in case any work be improperly executed, the engineer may require the contractor to remove the same, and to provide proper material or other things, or properly re-execute the work, as the case may be, and thereupon the contractor shall and will immediately comply with the said requisition, and if twenty-four hours shall elapse and such requisition shall not have been complied with, the Engineer may cause such material, or other things, or such work, to be removed; and in any such case the contractor shall pay to Her Majesty all such damages and expenses as shall be incurred in the removal of such material, materials, or other things, or of such work; or Her Majesty may, in her discretion, retain and deduct such damages and expenses from any amounts payable to the contractor.

All Plant and Material to become Property of Her Majesty.

12. All machinery and other plant, materials and things whatsoever, provided by the contractor for the works hereby contracted for, and not rejected under the

provisions of the last preceding clause, shall from the time of their being so provided become, and until the final completion of the said works, shall be the property of Her Majesty for the purposes of the said works, and the same shall on no account be taken away, or used or disposed of except for the purposes of the said works, without the consent in writing of the Engineer, and Her Majesty shall not be answerable for any loss or damage whatsoever which may happen to such machinery or other plant, material or things, provided always that upon the completion of the works and upon payment by the contractor of all such moneys, if any, as shall be due from him to Her Majesty, such of the said machinery and other plant, material and things as shall not have been used and converted in the works, and shall remain undisposed of, shall, upon demand, be delivered up to the contractor.

Insufficient Machinery.—Material or Labor to be Increased.

13. If the Engineer at any time shall consider the number of workmen, horses, or quantity of machinery or other plant, or the quantity of proper materials, respectively, employed or provided by the contractor on or for the said works, to be insufficient for the advancement thereof towards completion within the limited times, or that the works are, or some part thereof is not being carried on with due diligence, then in every such case the said Engineer may, by written notice to the contractor, require him to employ or provide such additional workmen, horses, machinery or other plant, or materials, as the Engineer may think necessary, and in case the contractor shall not thereupon within three days, or such other longer period as may be fixed by any such notice, in all respects comply therewith, then the Engineer may, either on behalf of Her Majesty, or if he see fit, may, as the agent of and on account of the contractor, but in either case at the expense of the contractor, provide and employ such additional workmen, horses, machinery and other plant, or any thereof or such additional and materials respectively, as he may think proper, and may pay such additional workmen such wages, and for such additional horses, machinery or other plant and materials, respectively, such prices as he may think proper, and all such wages and prices, respectively, shall thereupon at once be repaid by the contractor, or the sum may be retained and deducted out of any moneys at any time payable to the contractor; and Her Majesty may use, in the execution or advancement of the said work, not only the horses, machinery and other plant and materials so in any case provided by anyone on Her behalf, but also all such as may have been or may be provided by or on behalf of the said contractor.

Delay in Execution.—Work may be taken out of Contractor's Hand.

14. In case the contractor shall make default or delay in diligently continuing to execute or advance the works to the satisfaction of the Engineer, and such default or delay shall continue for six days after notice in writing shall have been given by the Engineer to the contractor requiring him to put an end to such default or delay, or in case the contractor shall become insolvent, or make an assignment for the benefit of creditors, or neglect either personally or by a skilful and competent agent to superintend the works, then in any of such cases Her Majesty may take the work out of the contractor's hands and employ such means as she may see fit to complete the work, and without further notice take possession of the road and works thereon, and of all horses, machinery and other plant, materials and things whatsoever as may then be on the road, or even such as may have been or may be provided by or on behalf of the said contractor for the said works, and in such cases the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works, and all materials and things whatsoever, and all horses, machinery, and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the pro-

visions and conditions contained in the twelfth clause hereof. And when this contract shall have been so completed by Her Majesty, any balance remaining in Her hands after meeting all costs and damages incurred, may be paid over to the contractor; it being distinctly understood and agreed that Her Majesty shall have full power to pay all such costs and damages out of any balance due to the contractor for works previously done, or materials and things whatsoever delivered or procured for the works, and out of any money or other security whatsoever deposited by the contractor, and that if such balance be not sufficient to meet all such costs and damages, the contractor and his sureties bind themselves to pay any deficiency in that respect.

Contractor to take risk of all loss or damage.

15. The contractor shall be at the risk of, and shall bear all loss or damage whatsoever, from whatsoever cause arising, which may occur to the works, or any of them, until the same be fully and finally completed and delivered up to and accepted by the said Minister for the time being, and if any such loss or damage occur before such final completion, delivery and acceptance, the contractor shall immediately, at his own expense, repair, restore and re-execute the work so damaged, so that the whole works, or the respective parts thereof, may be completed within the time hereby limited.

Contractor to have no claim for delay.

16. The contractor shall not have or make any claim or demand, or bring any action or suit or petition against Her Majesty for any damage which he may sustain by reason of any delay in the progress of the work, arising from the acts of any of Her Majesty's agents, and it is agreed that in the event of any such delay, the contractors shall have such further time for the completion of the works as may be fixed in that behalf by the Minister for the time being.

Contractor not to make assignment.—Work may be taken out of Contractor's hands.

17. The contractor shall not make any assignment of this contract, or any sub-contract, for the execution of any of the works hereby contracted for, and in any event no such assignment or sub-contract, even though consented to, shall exonerate the contractor from liability under this contract, for the due performance of all the work hereby contracted for. In the event of any such assignment or sub-contract being made, then the contractor shall not have or make any claim or demand upon Her Majesty for any future payments under this contract for any further or greater sum or sums than the sum or sums respectively at which the work or works so assigned or sub-contracted for shall have been undertaken to be executed by the assignee or sub-contractor, and in the event of any such assignment or sub-contract being made without such consent, Her Majesty may take the work out of the contractor's hands, and employ such means as she may see fit to complete the same, and in such case the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works, and all materials and all things whatsoever, and all horses, machinery, and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes, and according to the provisions and conditions contained in the twelfth clause hereof.

18. Time shall be deemed to be of the essence of this contract.

Contractors responsible for damage.

19. The contractor shall be responsible for all damages claimable by any person or corporation whatsoever, in respect of any injury to persons or to lands, buildings,

ships, or other property, or in respect of any infringement of any right whatsoever, occasioned by the performance of the said works, or by any neglect or misfeasance or non-misfeasance on his part, and shall and will at his own expense, make such temporary provisions as may be necessary for the protection of persons, or of lands, buildings, ships, or other property, or for the uninterrupted enjoyment of all rights of persons or corporations in and during the performance of the said works.

Failing to pay salaries or wages.

20. If the contractor fail at any time in paying the salaries or wages of any person employed by him upon or in respect of the said works, or any of them, and any part of such salary be one month in arrear, or if there be due to any such person one month's wages or salary, the Engineer may notify the contractor to pay such salary or wages, and if two days elapse and the same be not paid in full up to the date of payment, or to such other date as may be in accordance with the terms of employment of such person, then Her Majesty may pay to such person salary or wages from any date to any date, and to any amount which may be payable, and may charge the same to the contractor, and the contractor covenants with Her Majesty to repay at once any and every sum so paid.

Stakes and marks to be protected.

21. The contractor will protect and will not remove or destroy or permit to be removed or destroyed, the stakes, buoys, and other marks placed on or about the said works by the Engineers of the works, and shall furnish the necessary assistance to correct or replace any stake or mark which through any cause may have been removed or destroyed.

Contractors address.

22. Any notice or other communication mentioned in this contract to be notified or given to the contractors, shall be deemed to be well and sufficiently notified or given, if the same be left at the contractor's office or mailed in any post office, to the contractor or foreman, addressed to the address mentioned in the contract, or to the contractor's last known place of business.

Schedule of prices.

23. And Her Majesty, in consideration of the premises, hereby covenants with the contractor, and he will be paid for, and in respect of the works hereby contracted for, and in the manner set out in the next clause hereof the several prices or sums following, viz.,:

Number.	Description of Work.	Rates.	
		\$	cts.
1	Clearing	2	00 Per acre.
2	Grubbing	4	00 do
3	Platform of logs across muskegs, average 9 inches deep	750	00 do
4	Fencing	0	04 Per l. ft.
5	Earth excavation	0	16 Per c. yd.
6	Cribwork in abutments and piers of bridges, including stone filling	2	50 do
7	Rip-rap	1	50 do
8	Square timber and plank in trestle-work, culverts, bridges, etc., white pine or tamarac	0	28 Per c. ft.
9	Piles driven, 12 inches by 12 inches, tamarac	0	50 Per l. ft.
10	8-inch flatted timber	0	15 do
11	Wrought iron, including bolts, spikes, straps, etc.	0	07 Per lb.
12	Cast iron	0	07 do
13	Public road-crossings, including cattle-guards and connecting fences, sign-boards, gravelling roadway, etc.	145	00 Per crossing
14	Farm road-crossings, including gates, forming road-way, etc.	10	00 do
15	Ties	0	29 Per tie.
16	Carriage of rails and fastenings from Montreal	17	75 Per ton.
17	Track-laying	275	00 Per mile.
18	Ballasting	0	22 Per c. yd.
19	Points and crossings	20	00 Per set.
20	Station buildings, 60 feet by 24 feet, with platform, complete	2,250	00 Per station.

(Signed) H. A. F.

Payments.

24. Cash payments equal to about ninety per cent. of the value of the work done, approximately made up from returns of progress measurements and computed at the prices agreed upon or determined under the provisions of this contract, will be made to the contractor monthly, on the written certificate of the engineer that the work for or on account of which the certificate is granted, has been duly executed to his satisfaction, and stating the value of such work computed as above mentioned—and upon approval of such certificate by the Minister for the time being for the Dominion of Canada, and the said certificate and such approval thereof shall be a condition precedent to the right of the contractor to be paid the said ninety per cent. or any part thereof. The remaining ten per cent shall be retained until the final completion of the whole work to the satisfaction of the chief engineer for the time being, having control over the work, and within two months after such completion the remaining ten per cent will be paid. And it is hereby declared that the written certificate of the said engineer, certifying to the final completion of said works to his satisfaction, shall be a condition precedent to the right of the contractor to receive or be paid the said remaining ten per cent., or any part thereof.

Monthly Estimates.

25. It is intended that every allowance to which the contractor is fairly entitled, will be embraced in the engineer's monthly certificates; but should the contractor—

at any time have claims of any description which he considers are not included in the progress certificates, it will be necessary for him to make and repeat such claims in writing to the engineer, within fourteen days after the date of each and every certificate in which he alleges such claims to have been omitted.

Claims by Contractors.

26. The contractor, in presenting claims of the kind referred to in the last clause, must accompany them with satisfactory evidence of their accuracy, and the reason why he thinks they should be allowed. Unless such claims are thus made during the progress of the work, within fourteen days, as in the preceding clause, and repeated, in writing, every month, until finally adjusted or rejected, it must be clearly understood that they shall be forever shut out, and the contractor shall have no claim on Her Majesty in respect thereof.

Progress Measurements.

27. The progress measurements and progress certificates shall not in any respect be taken as an acceptance of the work or release of the contractor from responsibility in respect thereof, but he shall at the conclusion of the work deliver over the same in good order, according to the true intent and meaning of this contract.

Operations may be Suspended.—Resumed.

28. Her Majesty shall have the right to suspend operations from time to time at any particular point or points, or upon the whole of the works, and in the event of such right being exercised so as to cause any delay to the contractor, then an extension of time equal to such delay or detention, to be fixed by the Minister as above provided for, shall be allowed him to complete the contract, but no such delay shall vitiate or avoid this contract or any part thereof, or the obligation hereby imposed or any concurrent or other bond or security for the performance of this contract, nor shall the contractor be entitled to any claim for damages by reason of any such suspension of operations. And at any time after operations have been suspended either in whole or in part—such operations may be again resumed and again suspended and resumed as Her Majesty may think proper. And upon the contractor receiving written notice, on behalf of Her Majesty, that the suspended operations are to be resumed, the contractor shall at once resume the operations and diligently carry on the same.

Appropriation by Parliament.

29. Should the amount now voted by Parliament, and applicable towards payment for the work hereby contracted for, be at any time expended previous to the completion of the works, the Minister for the time being, may give the contractor written notice to that effect; and upon receiving such notice the contractor may, if he think fit, stop the work—but in any case shall not be entitled to any payment for work done, beyond the amount voted and applicable as aforesaid—unless and until the necessary funds have been voted by Parliament in that behalf. And in no event shall the contractor have or make any claim upon Her Majesty for any damages or compensation by reason of the said suspension of payment, or by reason of any delay or loss caused by the stoppage of work.

Spirituous Liquors.

30. The contractor shall not permit, allow, or encourage the sale of any spirituous liquors on or near the works.

No Sunday Labour.

31. No work whatever shall at any time or place be carried on during Sunday, and the contractor shall take all necessary steps for preventing any foreman, or agent, or men from working or employing others on that day.

Chief Engineer to be Arbitrator.

32. It is hereby agreed, that all matters of difference arising between the parties hereto, upon any matter connected with or arising out of this contract, the decision whereof is not hereby especially given to the engineer,—shall be referred to the award and arbitration of the chief engineer for the time being, having control over the works, and the award of such engineer shall be final and conclusive; and it is hereby declared that such award shall be a condition precedent to the right of the contractor to receive or be paid any sum or sums on account, or by reason of such matters in difference.

33. It is distinctly declared that no implied contract of any kind whatsoever, by, or on behalf of Her Majesty, shall arise or be implied from anything in this contract contained, or from any position or situation of the parties at any time, it being clearly understood and agreed that the express contracts, covenants and agreements herein contained and made by Her Majesty, are and shall be the only contracts, covenants and agreements upon which any rights against her are to be founded.

34. This contract is hereby, pursuant to the provisions of the 8th section of the Statute, 41st Victoria (1878), chapter 5, made subject to the express condition that no Member of the House of Commons of Canada shall be admitted to any share or part of such contract, or to any benefit to arise therefrom.

Contract may be Cancelled.

35. In the event of it becoming advisable, in the interests of the public, to suspend the work hereby contracted for, or any portion thereof, at any time before its completion, and to put an end to this contract, the Minister for the time being shall have full power to stop the work and to cancel this contract, on giving due notice to that effect to the contractor. The contractor, however, will be entitled to receive payment for all sums then due for work already done, materials used or delivered or ready to be used, or in course of preparation, together with such reasonable compensation as will cover all *bona fide* damages, if any, resulting therefrom, and as may then be agreed upon; or, in case of disagreement, as may be determined by the official arbitrators of the Dominion of Canada; it being understood, however, that no compensation will be allowed to, or claimed by, the contractor for materials procured for the works, after the date of the service of the notice above referred to, or for any loss of anticipated profits, either in respect of the works so suspended as aforesaid, or of the materials then procured for said works.

IN WITNESS whereof, the contractor hath hereto set his hand and seal—and these presents have been signed and sealed by the said Minister, and countersigned by the Secretary of the Department of Railways and Canals, on behalf of Her Majesty.

Signed, sealed and delivered by the contractor in presence of

(Signed) H. A. FISSIAULT.

(Signed) JOHN RYAN, (Seal.)

J. H. POPE,

Acting Minister of Railways and Canals.

Signed, sealed and delivered by the Minister, and countersigned by the Secretary in the presence of

(Signed) H. A. FISSIAULT.

(Signed)

F. H. ENNIS.

Acting Secretary.

SURETIES' INDENTURE.

THIS INDENTURE, made the nineteenth day of August, one thousand eight hundred and seventy-nine, between JAMES MURPHY, of the City of Ottawa, in the County of Carleton, and Province of Ontario, Contractor, and JOHN HENEY, of the same place, Wood Merchant, hereinafter called "The Sureties," of the first part, and Her Majesty Queen Victoria, of the second part.

WITNESSETH that the sureties hereby for themselves, and each of them, their and each of their heirs, executors and administrators, jointly and severally, covenant with Her Majesty and Her Successors, that the contractor named in the hereunto annexed Indenture, his executors and administrators, shall and will from time to time, and at all times, well and truly perform, keep and abide by all and singular the covenants, agreements and conditions in said Indenture contained, and on his part to be performed, kept and abided by. And the sureties, further, covenant and agree with Her Majesty and Her Successors, that all the rights, privileges and powers which may, by virtue of the said Indenture, be exercised by or on behalf of Her Majesty, or by the engineer or engineers, or other persons mentioned in said Indenture, may be so exercised without notice to the said sureties, and without in any way releasing or interfering with the liability of the sureties under their covenants herein contained.

In witness whereof, the parties hereto have hereunto set their hands and seals.

Signed, sealed and delivered
in presence of

(Signed) H. A. FISSIAULT.

(Signed)

JAMES MURPHY. [Seal.]
JOHN HENEY. [Seal.]

THIS INDENTURE made the twenty-third day of December, one thousand eight hundred and seventy-nine, between ANDREW ONDERDONK, of San Francisco, in the State of California, one of the United States of North America, Contractor and Civil Engineer, hereafter called "the Contractor" of the first part, and Her Majesty Queen Victoria represented herein by the Minister of Railways and Canals, of the second part, WITNESSETH, that in consideration of the covenants and agreements on the part of Her Majesty hereinafter contained, the contractor covenants and agrees with Her Majesty as follows :

Work.—Engineer.

1. In this contract the word "work" or "works" shall, unless the context require a different meaning, mean the whole of the work and the materials, matters and things required to be done, furnished and performed by the contractor under this contract. The word "engineer," shall mean the chief engineer for the time being having control over the work, and shall extend to and include any of his assistants acting under his instructions, and all instructions or directions, or certificates given, or decisions made by any one acting for the chief engineer, shall be subject to his approval, and may be cancelled, altered, modified and changed, as to him may seem fit.

On whom Binding.

2. All covenants and agreements herein contained shall be binding on and extend to the executors and administrators of the contractor, and shall extend to and be binding upon the successors of Her Majesty, and wherever in this contract Her Majesty is referred to, such reference shall include her successor, and wherever the contractor is referred to, such reference shall include his executors and administrators.

Labor, Plant and Material.—Time for Completion.—Materials and Workmanship.

3. That the contractor will, at his own expense, provide all and every kind of labor, machinery and other plant, materials, articles, and things whatsoever necessary for the due execution and completion of all and every the works set out or referred to in the general specifications hereunto annexed, dated 30th November, 1878, and marked A, and set out or referred to in the plans and drawings prepared and to be prepared for the purposes of the work, and in accordance with the printed memorandum herewith annexed, marked B, and will execute and fully complete the respective portions of such works and deliver the same complete to Her Majesty, on or before the thirty-first day of December, A.D., eighteen hundred and eighty-three. The said work to be constructed of the best materials of their several kinds, and finished in the best and most workmanlike manner, in the manner required by and in strict conformity with the said specifications and drawings which may from time to time be furnished (which said specifications and memorandum are hereby declared to be part of this contract); and to the complete satisfaction of the chief engineer for the time being having control over the work.

Omissions to be made Good.

4. The aforesaid specification and memorandum, and the several parts of this contract shall be taken together, to explain each other, and to make the whole consistent; and if it be found that anything has been omitted or mis-stated, which is necessary for the proper performance and completion of any part of the work contemplated, the contractor will, at his own expense, execute the same as if it had been properly described, and the decision of the engineer shall be final as to any such error or omission, and the correction of any such error or omission, shall not be deemed to be an addition to, or deviation from, the works hereby contracted for.

Engineer may order extra work, and make changes.

5. The chief engineer, with the sanction of the Minister, shall be at liberty at any time, either before the commencement or during the construction of the works or any portion thereof, to order any work to be done, and to make any changes which he may deem expedient in the grades, the width of cuttings and fillings, the dimensions, character, nature, location, or position of the works, or any part or parts thereof, or in any other thing connected with the works, whether or not such changes diminish the work to be done, or the cost of doing the same, and the contractor shall immediately comply with all written requisitions of the engineer in that behalf, but the contractor shall not make any change in or addition to, or omission, or deviation from the works, unless directed by the engineer, and shall not be entitled to any payment for any change, addition, or deviation, unless such change, addition, omission, or deviation, shall have been first directed in writing by the Engineer, and notified to the contractor in writing, nor unless the price to be paid for any additional work shall have been previously fixed by the Minister in writing, and the decision of the Engineer as to whether any such change or deviation increases or diminishes the cost of the work, and as to the amount to be paid or deducted, as the case may be in respect thereof, shall be final, and the obtaining of his certificate shall be a condition precedent to the right of the contractor to be paid therefor. If any such change or alteration constitutes, in the opinion of the said engineer, a deduction from the works, his decision as to the amount to be deducted on account thereof shall be final and binding.

Changes shall not Invalidate Contract.

6. That all the clauses of this contract shall apply to any changes, additions, or deviations, in like manner, and to the same extent, as to the works at present projected, and no changes, additions, deviations or variations shall annul or invalidate this contract.

Limit of Expenditure under this Contract.

7. It being the intention that the cost of the work to be done under contract be limited to the sum of Two Millions Seven Hundred and Twenty-seven Thousand Three Hundred Dollars, which sum is to be taken as the maximum amount of this contract, not to be exceeded; it is hereby specially agreed that should it, at any time during the execution of the said work, appear from the cost of the work then performed, as compared with the value of the works still to be done, that such maximum amount will be exceeded, whether by reason of additions, alterations, variations, for any other cause whatsoever, the contractor will then be required to complete only such portion of the works herein contemplated as will be indicated by the engineer, with the view to limit the total expenditure under this contract to the maximum above stated; and so soon as the said maximum amount will be expended, this contract will then be considered as ended, and the contractor will not thereafter be entitled to continue the works under this contract, or to receive any further payment beyond the said maximum amount, unless the Minister should authorize and direct further expenditure; in which case, it is understood that the Minister will have the right (which is hereby expressly reserved) to direct that any works, which may then remain to be done, shall be executed under this contract; and the contractor hereby agrees to execute the same at the rates or prices hereinafter mentioned, as if these remaining works formed part of this contract. Provided also, that in case the said works, on completion, by reason of alterations, variations, deviations, diminutions, omissions, or otherwise, should not amount to the total sum above mentioned, the contractor will not be entitled to the payment of the difference in cost, whatsoever the same may be. No compensation shall, in any case, be claimable by the contractor for any loss of anticipated profits.

Engineer to be sole Judge of Work, Material, &c.

8. That the Engineer shall be the sole judge of work and material in respect of both quantity and quality, and his decision on all questions in dispute with regard to work or material, or as to the meaning or intention of this contract and the plans, specifications and drawings shall be final, and no works or extra or additional works or changes shall be deemed to have been executed, nor shall the contractor be entitled to payment for the same, unless the same shall have been executed to the satisfaction of the engineer, as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the contractor to be paid therefor.

Schedule of Prices.

9. It is hereby distinctly understood and agreed, that the respective portions of the works set out or referred to in the list or schedule of prices to be paid for the different kinds of work, include not merely the particular kind of work or materials mentioned in said list or schedule, but also all and every kind of work, labor, tools, and plant materials, articles, and things whatsoever necessary for the full execution and completing ready for use of the respective portions of the works to the satisfaction of the Engineer. And in case of dispute as to what work, labor, materials, tools, and plant are or are not so included, the decision of the engineer shall be final and conclusive.

Foreman.

10. A competent foreman is to be kept on the ground by the contractor during all the working hours, to receive the orders of the engineer, and should the person so appointed be deemed by the Engineer to be incompetent, or conduct himself improperly, he may be discharged by the Engineer, and another shall at once be appointed in his stead; such foreman shall be considered as the lawful representative of the Contractor, and shall have full power to carry out all requisitions and instructions of the said engineer.

Unsuitable Material or Imperfect Work.

11. In case any material, or other things in the opinion of the engineer not in accordance with the said several parts of this contract, or not sufficiently sound or otherwise unsuitable for the respective works, be used for or brought to the intended works, or any part thereof, or in case any work be improperly executed, the engineer may require the Contractor to remove the same, and to provide proper material or other things, or properly re-execute the work, as the case may be, and thereupon the contractor shall and will immediately comply with the said requisition, and if twenty-four hours shall elapse and such requisition shall not have been complied with, the engineer may cause such material, or other things, or such work, to be removed; and in any such case the contractor shall pay to Her Majesty all such damages and expense as shall be incurred in the removal of such material, materials, or other things, or of such work; or Her Majesty may, in her discretion, retain and deduct such damages and expenses from any amounts payable to the contractor.

All Plant and Material to Become Property of Her Majesty.

12. All machinery and other plant, materials, and things whatsoever, provided by the contractor for the works hereby contracted for, and not rejected under the provisions of the last preceding clause, shall from the time of their being so provided become, and until the final completion of the said works, and the same shall, on no account, be taken away, or used or disposed of, except for the purposes of the said works, without the consent, in writing, of the engineer, and Her Majesty shall not

be answerable for any loss or damage whatsoever which may happen to such machinery, or other plant, material or things, provided always that upon the completion of the works, and upon payment by the contractor of all such moneys, if any, as shall be due from him to Her Majesty such of the said machinery and other plant, material and things as shall not have been used and converted in the works, and shall remain undisposed of shall, upon demand, be delivered up to the Contractor.

Insufficient Machinery.—Material or Labor to be Increased.

13. If the engineer shall, at any time, consider the number of workmen, horses, or quantity of machinery or other plant, or the quantity of proper materials, respectively, employed or provided by the contractor, on or for the said works, to be insufficient for the advancement thereof towards completion within the limited times, or that the works are, or some part thereof, is not being carried on with due diligence, then in every such case the said engineer may, by written notice to the contractor, require him to employ or provide such additional workmen, horses, machinery, or other plant or materials, as the engineer may think necessary, and in case the Contractor shall not thereupon within three days, or such other longer period as may be fixed by any such notice, in all respects comply therewith, when the engineer may, either on behalf of Her Majesty, or if he see fit, may, as the agent of and on account of the Contractor, but in either case at the expense of the Contractor, provide and employ such additional workmen, horses, machinery, and other plant, or any thereof, or such additional and materials respectively, as he may think proper, and may pay such additional workmen such wages, and for such additional horses, machinery or other plant, and materials respectively, such prices as he may think proper, and all such wages and prices respectively, shall thereupon at once be repaid by the Contractor, or the same may be retained and deducted out of any moneys at any time payable to the Contractor; and Her Majesty may use, in the execution or advancement of the said work, not only the horses, machinery, and other plant, and materials so in any case provided by any one on Her behalf, but also all such as may have been or may be provided by or on behalf of the said Contractor.

Delay in Execution.

14. In case the Contractor shall make default or delay in diligently continuing to execute or advance the works to the satisfaction of the Engineer, and such default of delay shall continue for six days after notice in writing shall have been given by the engineer to the contractor requiring him to put an end to such default or delay, or in case the contractor shall become insolvent, or make an assignment for the benefit of creditors, or neglect either personally or by a skilful and competent agent to superintend the works, then in any of such cases Her Majesty may take the work out of the contractor's hands and employ such means as she may see fit to complete the work, and in such cases the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and things whatsoever, and all horses, machinery and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

Contractor to take Risk of all Loss or Damage.

15. The contractor shall be at the risk of, and shall bear, all loss or damage whatsoever, from whatsoever cause arising, which may occur to the works, or any of them, until the same be fully and finally completed and delivered up to and accepted by the said Minister for the time being; and if any such damage or loss occur before

such final completion, delivery and acceptance, the contractor shall immediately at his own expense repair, restore and re-execute the work so damaged, so that the whole works, or the respective parts thereof, may be completed within the time hereby limited.

Contractor to have no Claim for Delay.

16. The contractor shall not have or make any claim or demand, or bring any action or suit or petition against Her Majesty for any damage which he may sustain by reason of any delay in the progress of the work, arising from the acts of any of Her Majesty's agents, and it is agreed that in the event of any such delay the contractor shall have such further time for the completion of the works as may be fixed in that behalf by the Minister for the time being.

Contractor not to make Assignment.—Work may be taken out of Contractor's Hands.

17. The contractor shall not make any assignment of this contract, or any sub-contract, for the execution of any of the works hereby contracted for; and in any event no such assignment or sub-contract, even though consented to, shall exonerate the contractor from liability, under this contract, for the due performance of all the work hereby contracted for. In the event of any such assignment or sub-contract being made, then the contractor shall not have or make any claim or demand upon Her Majesty for any future payments under this contract for any further or greater sum or sums than the sum or sums respectively at which the work or works so assigned or sub-contracted for shall have been undertaken to be executed by the assignee or sub-contractor; and in the event of any such assignment or sub-contract being made without such consent, Her Majesty may take the work out of the contractor's hands, and employ such means as she may see fit to complete the same; and in such case the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and things whatsoever, and all horses, machinery, and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

18. Time shall be deemed to be of the essence of this contract.

Contractor Responsible for Damage.

19. The contractor shall be responsible for all damages claimable by any person or corporation whatsoever, in respect of any injury to persons or to lands, buildings, ships or other property, or in respect of any infringement of any right whatsoever, occasioned by the performance of the said works, or by any neglect or misfeasance or non-misfeasance on his part, and shall and will at his own expense, make such temporary provisions as may be necessary for the protection of persons, or of lands, buildings, ships or other property, or for the uninterrupted enjoyment of all rights of persons or corporations, in and during the performance of the said works.

Failing to Pay Salaries or Wages.

20. If the contractor fail at any time in paying the salaries or wages of any person employed by him upon or in respect of the said works, or any of them, and any part of such salary be one month in arrear, or if there be due to any such person one month's wages or salary, the engineer may notify the contractor to pay such salary or wages, and if two days elapse and the same be not paid in full up to the date of payment or to such other date as may be in accordance with the terms of employment of such person, then Her Majesty may pay to such person salary or

wages from any date to any date, and to any amount which may be payable, and may charge the same to the contractor, and the contractor covenants with Her Majesty to repay at once any and every sum so paid.

Stakes and Marks to be Protected.

21. The contractor will protect and will not remove or destroy, or permit to be removed or destroyed, the stakes, buoys and other marks placed on or about the said works by the engineers of the works, and shall furnish the necessary assistance to correct or replace any stake or mark which through any cause may have been removed or destroyed.

Contractor's Address.

22. Any notice or other communication mentioned in this contract to be notified or given to the contractor shall be deemed to be well and sufficiently notified, or given, if the same be left at the contractor's office or mailed in any Post Office, to the contractor or foreman, addressed to the address mentioned in this contract, or to the contractor's last known place of business.

Schedule of Prices.

23. And Her Majesty, in consideration of the premises, hereby covenants with the contractor that he will be paid for and in respect of the works hereby contracted for, and in the manner set out in the next clause hereof, the several prices or sums following, viz.:—

SCHEDULE OF QUANTITIES AND PRICES.

*Approximate Quantities.		Description of Work.	Rates.	Amount.
			\$ cts.	\$ cts.
250	Acres	Clearing.....per acre	30 00	7,500 00
10	do	Close cutting.....do	40 00	400 00
10	do	Grubbing.....do	80 00	800 00
10,000	L. feet	Fencing.....per l. ft.	05	500 00
500,000	C. yards	Solid rock excavation.....per c. yd.	1 50	750,000 00
250,000	do	Loose rock excavation.....do	75	187,500 00
1,500,000	do	Earth excavation (including that described in Clause 13 of Specification).....do	30	450,000 00
2,000	L. feet	Under-drains.....per l. ft.	40	800 00
		Tunnelling (See clause 32 of Specification.)		
say 6,000	do	"Line Tunnels" in rock, in the following lengths: 300 ft., 50, 150, 105, 240, 400, 360, 385, 290, 200, 150, 140, 1,600, 100, 150, 100, 110, 230, 350 and 500 ft.....do	105 00	630,000 00
200	do	"Twelve feet—Stream Tunnels".....do	36 00	7,200 00
1,000	do	"Six feet—Stream Tunnels".....do	12 00	12,000 00
15,000	C. yards	Bridge masonry.....per c. yd.	10 00	150,000 00
10,000	do	Culvert masonry.....do	6 00	60,000 00
5,000	do	Dry masonry (retaining walls, etc.).....do	4 00	20,000 00
1,000	do	Paving.....do	3 00	3,000 00
1,000	do	Concrete.....do	6 00	6,000 00
1,000	do	Rip-rap.....do	3 00	3,000 00

SCHEDULE OF QUANTITIES AND PRICES—Continued.

*Approximate Quantities.		Description of Work.	Rates.	Amount.
			\$ cts.	\$ cts.
500	L. feet	Cast-iron pipes, 3ft. diameter inside, 1 in. thick, laid in concrete (the concrete not included in this item)..... per l. ft.	10 00	5,000 00
15,000	C. yards	Hand-laying rock embankments, where slopes are steeper than 1 to 1 (labor only)..... per c. yd.	75	11,250 00
8	No.	Timber bridge superstructure, 150 ft. clear..... per span.	7,500 00	60,000 00
1	do	do do 125 do do	6,250 00	6,250 00
6	do	do do 100 do do	4,000 00	24,000 00
1	do	do do 60 do do	2,100 00	2,100 00
3	do	do do 40 do do	1,400 00	4,200 00
(See clauses 42 and 43 of Specification.)				
2,000	L. feet	Timber, best quality, for beam culverts, &c. : 12 ft. x 16 ft..... per l. ft.	0 30	600 00
5,000	do	12 ft. x 12 ft..... do	0 30	1,500 00
1,500	do	8 ft. x 16 ft..... do	0 25	375 00
1,400	do	8 ft. x 12 ft..... do	0 25	350 00
Other dimensions of timber (if required to be used) at proportionate prices.				
10,000	do	Piles driven (See clause 40 of Specification)..... per l. ft.	0 40	4,000 00
10,000	do	Round timber for crib wharfing, etc., not less than 12 in. diameter..... do	0 20	2,000 00
3,000	do	Flatted timber in road diversion culverts, 12 in. thick..... do	0 25	750 00
20,000	F. B.M.	Plank..... per M.	25 00	500 00
3,000	Lbs.	Wrought iron..... per lb.	0 15	450 00
500	do	Cast iron..... do	0 15	75 00
75,000	No.	Ties..... Each.	0 30	22,500 00
3,000	Tons.	Carriages of rails and fastenings, from lower end of Section, including all handling..... Tons.	1 00	3,000 00
30	Miles.	Tracklaying..... Miles.	300 00	9,000 00
100,000	C. yards	Ballasting..... per c. yd.	0 30	30,000 00
20	No.	Setting points and crossings..... Each.	25 00	500 00
4	do	Public road level crossings, comprising timber cattle-guards, planking, small timber culverts under approaches, and notice-boards, complete..... Each.	50 00	200 00
To cover work which possibly may be required under clauses 18, 43 and 91 of General Specification, short quantities and contingencies, add, say \$250,000.....				250,000 00
Total				2,727,300 00

*NOTE.—Some of the quantities printed in this column are estimated from preliminary location measurements, and may be considered roughly approximate. Other items are simply conjectured, and placed herein for the purpose of obtaining rates.

Payments.

24. Cash payments equal to about ninety per cent. of the value of the work done, approximately made up from returns of progress measurements and computed at the prices agreed upon or determined under the provisions of this contract, will

be made to the contractor monthly on the written certificate of the engineer that the work for or on account of which the certificate is granted, has been duly executed to his satisfaction and stating the value of such work computed as above mentioned—and upon approval of such certificate by the Minister for the time being, and the said certificate and such approval thereof shall be a condition precedent to the right of the contractor to be paid the said ninety per cent. or any part thereof. The remaining ten per cent. shall be retained until the final completion of the whole work to the satisfaction of the chief engineer for the time being, having control over the work, and within two months after such completion the remaining ten per cent. will be paid. And it is hereby declared that the written certificate of the said engineer certifying to the final completion of the said works to his satisfaction shall be a condition precedent to the right of the contractor to receive or be paid the said remaining ten per cent., or any part thereof.

Monthly Estimates.

25. It is intended that every allowance to which the contractor is fairly entitled, will be embraced in the engineer's monthly certificates; but should the contractor at any time have claims of any description which he considers are not included in the progress certificates, it will be necessary for him to make and repeat such claims in writing to the engineer, within fourteen days after the date of each and every certificate in which he alleges such claims to have been omitted.

Claims by Contractors.

26. The contractor in presenting claims of the kind referred to in the last clause must accompany them with satisfactory evidence of their accuracy, and the reason why he thinks they should be allowed. Unless such claims are thus made during the progress of the work, within fourteen days, as in the preceding clause, and repeated, in writing, every month, until finally adjusted or rejected, it must be clearly understood that they shall be forever shut out, and the contractor shall have no claim on Her Majesty in respect thereof.

Progress Measurements.

27. The progress measurements and progress certificates shall not in any respect be taken as an acceptance of the work or release of the contractor from responsibility in respect thereof, but he shall at the conclusion of the work deliver over the same in good order, according to the true intent and meaning of this contract.

Operations may be suspended.—Resumed.

28. Her Majesty shall have the right to suspend operations from time to time at any particular point or points or upon the whole of the works, and in the event of such right being exercised so as to cause any delay to the contractor, then an extension of time equal to such delay or detention, to be fixed by the Minister as above provided for, shall be allowed him to complete the contract, but no such delay shall vitiate or avoid this contract or any part thereof, or the obligations hereby imposed or any concurrent or other bond or security for the performance of this contract, nor shall the contractor be entitled to any claim for damages by reason of any such suspension of operations. And at any time after operations have been suspended either in whole or in part, such operations may be again resumed and again suspended and resumed as Her Majesty may think proper. And upon the contractor receiving written notice on behalf of Her Majesty that the suspended operations are to be resumed, the contractor shall at once resume the operations and diligently carry on the same.

Appropriation by Parliament.

29. Should the amount now voted by Parliament and applicable towards payment for the work hereby contracted for, be at any time expended previous to the completion of the works, the Minister for the time being may give the contractor written notice to that effect. And upon receiving such notice the contractor may, if he thinks fit, stop the work—but in any case shall not be entitled to any payment for work done, beyond the amount voted and applicable as aforesaid—unless and until the necessary funds shall have been voted by Parliament in that behalf. And in no event shall the contractor have or make any claim upon Her Majesty for any damages or compensation by reason of the said suspension of payment, or by reason of any delay or loss caused by the stoppage of work.

Spirituuous Liquors.

30. The contractor shall not permit, allow, or encourage the sale of any spirituous liquors on or near the works.

No Sunday labour.

31. No work whatever shall at any time or place be carried on during Sunday and the contractor shall take all necessary steps for preventing any foreman, or agent, or men from working or employing others on that day.

Chief Engineer to be Arbitrator.

32. It is hereby agreed, that all matters of difference arising between the parties hereto, upon any matter connected with or arising out of this contract, the decision whereof is not hereby especially given to the engineer, shall be referred to the award and arbitration of the chief engineer for the time being, having control over the works, and the award of such Engineer shall be final and conclusive; and it is hereby declared that such award shall be a condition precedent to the right of the contractor to receive or be paid any sum or sums on account, or by reason of such matters in difference.

33. It is distinctly declared that no implied contract of any kind whatsoever, by or on behalf of Her Majesty, shall arise or be implied from anything in this contract contained, or from any position or situation of the parties at any time, it being clearly understood and agreed that the express contracts, covenants and agreements herein contained and made by Her Majesty, are and shall be the only contracts, covenants and agreements upon which any rights against Her Majesty are to be founded.

34. This contract is hereby, pursuant to the provisions of the 8th section of the Statute, 41st Victoria (1878), chapter 5, made subject to the express condition that no Member of the House of Commons of Canada shall be admitted to any share or part of such contract, or to any benefit to arise therefrom.

Contract may be Cancelled.

35. In the event of it becoming advisable, in the interests of the public, to suspend the work hereby contracted for, or any portion thereof, at any time before its completion, and to put an end to this contract, the Minister for the time being shall have full power to stop the work and to cancel this contract, on giving due notice to that effect to the contractor. The contractor, however, will be entitled to receive payment for all sums then due for work already done, materials used or delivered, or ready to be used, or in course of preparation, together with such reasonable compensation as will cover all *bond fide* damages, if any, resulting therefrom, and as may then be agreed upon; or, in case of disagreement, as may be determined by the Official Arbitrators of the Dominion of Canada; it being understood, however,

that no compensation will be allowed to or claimed by the contractor for materials procured for the works, after the date of the service of the notice above referred to, or for any loss of anticipated profits, either in respect of the works so suspended, as aforesaid, or of the materials then procured for said works.

IN WITNESS whereof, the contractor hath hereto set his hand and seal, and these presents have been signed and sealed by the said Minister, and countersigned by the Secretary of the Department of Railways and Canals, on behalf of Her Majesty.

Signed, sealed and delivered by
the contractor, in presence of
(Signed) H. A. FISSIAULT. } (Signed) ANDREW ONDERDONK. [L.S.]

Signed, sealed and delivered by
the Minister, and countersigned
by the Secretary, in presence of
(Signed) H. A. FISSIAULT. } (Signed) CHARLES TUPPER,
Minister of Railways and Canals.
(Signed) F. BRAUN, Secretary. [L.S.]

SURETIES' INDENTURE.

THIS INDENTURE, made the twenty-third day of December, one thousand eight hundred and seventy-nine, between DUNCAN MACDONALD, of the city of Montreal, in the Province of Quebec, contractor, and ANGUS PETER MACDONALD, of the same place, contractor, hereinafter called "The Sureties," of the first part, and Her Majesty Queen Victoria, of the second part.

WITNESSETH that the sureties hereby for themselves, and each of them, their and each of their heirs, executors and administrators, jointly and severally, covenant with Her Majesty and Her successors, that the contractor named in the hereunto annexed Indenture, his executors and administrators, shall and will from time to time, and at all times, well and truly perform, keep and abide by all and singular the covenants, agreements and conditions in said Indenture contained, and on his part to be performed, kept and abided by. And the sureties, further, covenant and agree with Her Majesty and Her successors, that all the rights, privileges and powers which may, by virtue of the said Indenture, be exercised by or on behalf of Her Majesty, or by the Engineer or Engineers, or other persons mentioned in said Indenture, may be so exercised without notice to the said sureties, and without in any way releasing or interfering with the liability of the sureties under their covenants herein contained.

In witness whereof, the parties hereto have hereunto set their hands and seals.

Signed, sealed and delivered } (Signed) DUNCAN MACDONALD. [L.S.]
in presence of
(Signed) H. A. FISSIAULT. } (Signed) A. P. MACDONALD. [L.S.]

THIS INDENTURE made the tenth day of February, one thousand eight hundred and eighty, between PATRICK PURCELL, of Williamstown, HUGH RYAN, of Perth, JAMES GOODWIN of Ottawa, in the Province of Ontario, and JAMES N. SMITH, of Brooklyn, in the State of New York, one of the United States of North America, carrying on together the business of contractors as partners under the name, style, and firm of "Ryan, Goodwin & Co.," hereafter called "the Contractors" of the first part, and Her Majesty Queen Victoria represented herein by the Minister of Railways and Canals, of the second part, WITNESSETH; that in consideration of the covenants and agreements on the part of Her Majesty hereinafter contained, the contractors covenant and agree with Her Majesty as follows:

Work.—Engineer.

1. In this contract the word "work" or "works" shall, unless the context require a different meaning, mean the whole of the work and the materials, matters and things required to be done, furnished and performed by the contractors under this contract. The word "engineer," shall mean the chief engineer for the time being having control over the work, and shall extend to and include any of his assistants acting under his instructions, and all instructions or directions, or certificates given or decisions made by any one acting for the chief engineer, shall be subject to his approval, and may be cancelled, altered, modified and changed, as to him may see fit.

On whom Binding.

2. All covenants and agreements herein contained shall be binding on and extend to the executors and administrators of the contractors, and shall extend to and be binding upon the successors of Her Majesty, and wherever in this contract Her Majesty is referred to, such reference shall include her successors, and wherever the contractors are referred to, such reference shall include their executors and administrators.

Labor, Plant and Material.—Time for Completion.—Materials and Workmanship.

3. That the contractors will, at their own expense, provide all and every kind of labor, machinery and other plant, materials, articles, and things whatsoever necessary for the due execution and completion of all and every the works set out or referred to in the general specifications hereunto annexed, dated 30th November, 1878, and marked A, and set out or referred to in the plans and drawings prepared and to be prepared for the purposes of the work, and in accordance with the printed memorandum herewith annexed, marked B, and will execute and fully complete the respective portions of such works, and deliver the same complete to Her Majesty, on or before the thirtieth day of June, A.D. eighteen hundred and eighty-four. The said work to be constructed of the best materials of their several kinds, and finished in the best and most workmanlike manner, in the manner required by and in strict conformity with the said specifications and drawings which may from time to time be furnished (which said specifications and memorandum are hereby declared to be part of this contract), and to the complete satisfaction of the chief engineer for the time being having control over the work.

Omissions to be Made Good.

4. The aforesaid specification and memorandum, and the several parts of this contract shall be taken together, to explain each other, and to make the whole consistent; and if it be found that anything has been omitted or mis-stated, which is necessary for the proper performance and completion of any part of the work contemplated, the contractors will, at their own expense, execute the same as it had been

properly described, and the decision of the engineer shall be final as to any such error or omission, and the correction of any such error or omission, shall not be deemed to be an addition to or deviation from the works hereby contracted for.

Engineer may Order Extra Work and Make Changes.

5. The chief engineer, with the sanction of the Minister, shall be at liberty at any time, either before the commencement or during the construction of the works or any portion thereof, to order any work to be done, and to make any changes which he may deem expedient in the grades, the width of cuttings and fillings, the dimensions, character, nature, location, or position of the works, or any part or parts thereof, or in any other thing connected with the work, whether or not such changes diminish the work to be done, or the cost of doing the same; and the contractors shall immediately comply with all written requisitions of the engineer in that behalf, but the contractors shall not make any changes in or addition to, or omission, or deviation from the works, unless directed by the engineer, and shall not be entitled to any payment for any change, addition, or deviation, unless such change, addition, omission, or deviation shall have been first directed in writing by the engineer, and notified to the contractors in writing, nor unless the price to be paid for any additional work shall have been previously fixed by the Minister in writing, and the decision of the engineer as to whether any such change or deviation increases or diminishes the cost of the work, and as to the amount to be paid or deducted, as the case may be, in respect thereof, shall be final, and the obtaining of his certificate shall be a condition precedent to the right of the contractors to be paid therefor. If any such change or alteration constitutes, in the opinion of the said engineer, a deduction from the works, his decision as to the amount to be deducted on account thereof shall be final and binding.

Changes shall not Invalidate Contract.

6. That all the clauses of this contract shall apply to any changes, additions, or deviations, in like manner, and to the same extent, as to the works at present projected, and no changes, additions, deviations or variations shall annul or invalidate this contract.

Limit of Expenditure under this Contract.

7. It being the intention that the cost of the work to be done under this contract be limited to the sum of Two Millions Five Hundred and Seventy-three Thousand Six Hundred and Forty Dollars, which sum is to be taken as the maximum amount of this contract, not to be exceeded; it is hereby specially agreed that should it, at any time during the execution of the said work, appear from the cost of the work then performed, as compared with the value of the works still to be done, that such maximum amount will be exceeded, whether by reason of additions, alterations, variations, for any other cause whatsoever, the contractors will then be required to complete only such portion of the works herein contemplated as will be indicated by the engineer, with the view to limit the total expenditure under this contract to the maximum above stated; and so soon as the said maximum amount will be expended, this contract will then be considered as ended, and the contractors will not thereafter be entitled to continue the works under this contract, or to receive any further payment beyond the said maximum amount, unless the Minister should authorize and direct further expenditure; in which case, it is understood that the Minister will have the right (which is hereby expressly reserved) to direct that any works, which may then remain to be done, shall be executed under this contract; and the contractors hereby agree to execute the same at the rates or prices hereinafter mentioned, as if these remaining works formed part of this contract. Provided also, that in case the said works, on completion, by reason of alterations, variations, deviations, diminutions,

omissions, or otherwise, should not amount to the total sum above mentioned, the contractors will not be entitled to the payment of the difference in cost, whatsoever the same may be. No compensation shall, in any case, be claimable by the contractors for any loss of anticipated profits.

Engineer to be Sole Judge of Work, Material, &c.

8. That the engineer shall be the sole judge of work and material in respect of both quantity and quality, and his decision on all questions in dispute with regard to work or material, or as to the meaning or intention of this contract, and the plans, specifications and drawings shall be final, and no works or extra or additional works or changes shall be deemed to have been executed, nor shall the contractors be entitled to payment for the same, unless the same shall have been executed to the satisfaction of the engineer, as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the contractors to be paid therefor

Schedule of Prices.

9. It is hereby distinctly understood and agreed, that the respective portions of the works set out or referred to in the list or schedule of prices to be paid for the different kinds of work, include not merely the particular kind of work or materials mentioned in said list or schedule, but also all and every kind of work, labor, tools and plant, materials, articles and things whatsoever necessary for the full execution and completing ready for use of the respective portions of the works to the satisfaction of the engineer. And in case of dispute as to what work, labor, materials, tools and plant are or are not so included, the decision of the engineer shall be final and conclusive.

Foreman.

10. A competent foreman is to be kept on the ground by the contractors during all the working hours, to receive the orders of the engineer, and should the person so appointed be deemed by the engineer incompetent, or conduct himself improperly, he may be discharged by the engineer, and another shall at once be appointed in his stead; such foreman shall be considered as the lawful representative of the contractors, and shall have full power to carry out all requisitions and instructions of the said engineer.

Unsuitable Material or Imperfect Work.

11. In case any material, or other things, in the opinion of the engineer not in accordance with the said several parts of this contract, or not sufficiently sound or otherwise unsuitable for the respective works, be used for or brought to the intended works, or any part thereof, or in case any work be improperly executed, the engineer may require the contractors to remove the same, and to provide proper material or other things, or properly re-execute the work, as the case may be, and thereupon the contractors shall and will immediately comply with the said requisition, and if twenty-four hours shall elapse and such requisition shall not have been complied with, the engineer may cause such material, or other things, or such work, to be removed; and in any such case the contractors shall pay to Her Majesty all such damages and expense as shall be incurred in the removal of such material, materials or other things, or of such work; or Her Majesty may, in Her discretion, retain and deduct such damages and expenses from any amounts payable to the contractors.

All Plant and Material to Become Property of Her Majesty.

12. All machinery and other plant, materials and things whatsoever, provided by the contractors for the works hereby contracted for, and not rejected under the

provisions of the last preceding clause, shall from the time of their being so provided become, and until the final completion of the said works, shall be the property of Her Majesty for the purposes of the said works, and the same shall on no account be taken away, or used or disposed of except for the purposes of the said works, without the consent in writing of the engineer, and Her Majesty shall not be answerable for any loss or damage whatsoever which may happen to such machinery or other plant, material or things, provided always that upon the completion of the works and upon payment by the contractors of all such moneys, if any, as shall be due from them to Her Majesty such of the said machinery and other plant, material and things as shall not have been used and converted in the works, and shall remain undisposed of shall, upon demand, be delivered up to the contractors.

Insufficient Machinery.—Material or Labour to be Increased.

13. If the engineer shall at any time consider the number of workmen, horses or quantity of machinery or other plant, or the quantity of proper materials, respectively employed or provided by the contractors on or for the said works, to be insufficient for the advancement thereof towards completion within the limited times, or that the works are, or some part thereof is not being carried on with due diligence, then in every such case the said engineer may, by written notice to the contractors, require them to employ or provide such additional workmen, horses, machinery or other plant or materials as the engineer may think necessary, and in case the contractors shall not thereupon, within three days, or such other longer period as may be fixed by any such notice, in all respects comply therewith, then the engineer may, either on behalf of Her Majesty, or if he see fit, may, as the agent of and on account of the contractors, but in either case at the expense of the contractors, provide and employ such additional workmen, horses, machinery and other plant, or any thereof or such additional and materials respectively, as he may think proper, and may pay such additional workmen such wages, and for such additional horses, machinery or other plant and materials respectively, such prices as he may think proper, and all such wages and prices respectively shall thereupon at once be repaid by the contractors, or the same may be retained and deducted out of any moneys at any time payable to the contractors; and Her Majesty may use, in the execution or advancement of the said work, not only the horses, machinery and other plant and materials so in any case provided by anyone on Her behalf, but also all such as may have been or may be provided by or on behalf of the said contractors.

Delay in Execution.—Work may be taken out of Contractors' Hands.

14. In case the contractors shall make default or delay in diligently continuing to execute or advance the works to the satisfaction of the engineer, and such default of delay shall continue for six days after notice in writing shall have been given by the engineer to the contractors requiring them to put an end to such default or delay, or in case the contractors shall become insolvent, or make an assignment for the benefit of creditors, or neglect, either personally or by a skilful and competent agent, to superintend the works, then in any of such cases Her Majesty may take the work out of the contractors' hands and employ such means as She may see fit to complete the work, and in such cases the contractors shall have no claim for any further payments in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractors of the works; and all materials and things whatsoever, and all horses, machinery and other plant provided by them for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions of the said conditions contained in the twelfth clause hereof.

Contractors to take Risk of all Loss or Damage.

15. The contractors shall be at the risk of and shall bear all loss or damage whatsoever, from whatsoever cause arising, which may occur to the works, or any of them, until the same be fully and finally completed and delivered up to and accepted by the said Minister for the time being; and if any such loss or damage occur before such final completion, delivery and acceptance, the contractors shall immediately, at their own expense, repair, restore and re-execute the work so damaged, so that the whole works, or the respective parts thereof, may be completed within the time hereby limited.

Contractors to have no Claim for Delay.

16. The contractors shall not have or make any claim or demand, or bring any action or suit or petition against Her Majesty for any damage which they may sustain by reason of any delay in the progress of the work, arising from the acts of any of Her Majesty's agents, and it is agreed that in the event of any such delay the contractors shall have such further time for the completion of the works as may be fixed in that behalf by the Minister for the time being.

Contractors not to make Assignment.—Work may be taken out of Contractors' Hands.

17. The contractors shall not make any assignment of this contract, or any sub-contract, for the execution of any of the works hereby contracted for and in any event no such assignment or sub-contract, even though consented to, shall exonerate the contractors from liability, under this contract, for the due performance of all the work hereby contracted for. In the event of any such assignment or sub-contract being made, then the contractors shall not have or make any claim or demand upon Her Majesty for any future payments under this contract for any further or greater sum or sums than the sum or sums respectively at which the work or works so assigned or sub-contracted for shall have been undertaken to be executed by the assignee or sub-contractor; and in the event of any such assignment or sub-contract being made without such consent, Her Majesty may take the work out of the contractor's hands, and employ such means as she may see fit to complete the same; and in such case the contractors shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non completion by the contractors of the works; and all materials and things whatsoever, and all horses, machinery and other plant provided by them for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

18. Time shall be deemed to be of the essence of this contract.

Contractors Responsible for Damage.

19. The contractors shall be responsible for all damages claimable by any person or corporation whatsoever, in respect of any injury to persons or to lands, buildings, ships or other property, or in respect of any infringement of any right whatsoever, occasioned by the performance of the said works, or by any neglect or misfeasance or non-misfeasance on their part, and shall and will at their own expense, make such temporary provisions as may be necessary for the protection of persons, or of lands, buildings, ships or other property, or for the uninterrupted enjoyment of all rights of persons or corporations, in and during the performance of the said works.

Failing to pay Salaries or Wages.

20. If the contractors fail at any time in paying the salaries or wages of any person employed by them upon or in respect of the said works, or any of them, and

any part of such salary be one month in arrear, or if there be due to any such person one month's wages or salary, the engineer may notify the contractors to pay such salary or wages, and if two days elapse and the same be not paid in full up to the date of payment or to such other date as may be in accordance with the terms of employment of such person, then Her Majesty may pay to such person salary or wages from any date to any date, and to any amount which may be payable, and may charge the same to the contractors, and the contractors covenant with Her Majesty to repay at once any and every sum so paid.

Stakes and Marks to be Protected.

21. The contractors will protect and will not remove or destroy or permit to be removed or destroyed, the stakes, buoys and other marks placed on or about the said works by the engineers of the works, and shall furnish the necessary assistance to correct or replace any stake or mark which through any cause may have been removed or destroyed.

Contractors' Address.

22. Any notice or other communication mentioned in this contract to be notified or given to the contractors shall be deemed to be well and sufficiently notified or given, if the same be left at the contractors' office or mailed in any post office, to the contractors or foreman, addressed to the address mentioned in this contract, or to the contractors last known place of business.

Schedule of Prices.

23. And Her Majesty, in consideration of the premises, hereby covenants with the contractors, that they will be paid for and in respect of the works hereby contracted for, and in the manner set out in the next clause hereof the several prices or sums following, viz:

SCHEDULE OF QUANTITIES AND PRICES.

*Approximate Quantities.	Description of Work.	Rates.	Amount.
		\$ cts.	\$ cts.
400 Acres	Clearing	25 00	10,000 00
10 do	Close cutting.....	30 00	300 00
10 do	Grubbing	100 00	1,000 00
10,000 L. feet	Fencing.....	0 06	600 00
200,000 C. yards	Solid rock excavation	180 00	360,000 00
300,000 do	Loose rock excavation.....	0 75	225,000 00
3,000,000 do	Earth excavation (including that described in Clause 13 of Specification)	0 30	900,000 00
2,000 L. feet	Under-drains	0 40	800 00
	Tunnelling (See clause 32 of Specification).		
Say 600 do	"Line tunnels".....	120 00	72,000 00
100 do	"Twelve feet—stream tunnels".....	50 00	5,000 00
500 do	"Six feet—stream tunnels".....	20 00	10,000 00

SCHEDULE OF QUANTITIES AND PRICES—Continued.

*Approximate Quantities.	Description of Work.	Rates.	Amount.
		\$ cts.	\$ cts.
25,000 C. yards	Bridge masonry.....per c. yd.	12 00	300,000 00
10,000 do	Culvert masonry.....do	8 00	80,000 00
25,000 do	Dry masonry (retaining walls, etc.).....do	3 00	75,000 00
1,000 do	Paving.....do	2 50	2,500 00
1,000 do	Concrete.....do	7 00	7,000 00
30,000 do	Rip-rap.....do	2 00	60,000 00
500 L. feet	Cast iron pipes, 3 ft. diameter inside, 1 in. thick, laid in concrete (the concrete not included in this item).....per l. ft.	30 00	15,000 00
1,000 C. yards	Hand-laying rock embankments, where slopes are steeper than 1 to 1 (labour only).....per c. yd.	0 50	500 00
1 No.	Timber bridge superstructure, 150 ft. clear.....per span	5,800 00	5,800 00
1 do	do do 125 do.....do	4,200 00	4,200 00
34 do	do do 100 do.....do	3,000 00	102,000 00
1 do	do do 60 do.....do	1,500 00	1,500 00
1 do	do do 40 do.....do	1,000 00	1,000 00
	(See clauses 42 and 43 of Specification)		
200 L. feet	Timber, best quality, for beam culverts, &c.: 12 ft. X 16 ft.....per l. ft.	0 60	120 00
2,000 do	12 ft. X 12 ft.....do	0 45	900 00
200 do	8 ft. X 16 ft.....do	0 40	80 00
200 do	8 ft. X 12 ft.....do	0 30	60 00
	Other dimensions of timber (if required to be used) at proportionate prices.		
10,000 do	Piles driven (See clause 40 of Specification).....do	0 50	5,000 00
10,000 do	Round timber for crib-wharfing, &c, not less than 12 in. diameter.....do	0 30	3,000 00
3,000 do	Flatted timber in road diversion culverts, 12 in. thick.....do	0 25	750 00
10,000 Ft. B.M.	Plank.....per M.	30 00	300 00
1,000 Lbs.	Wrought iron.....per lb.	0 12	120 00
100 do	Cast iron.....do	0 10	10 00
75,000 No.	Ties.....each.	0 30	22,500 00
3,000 Tons	Carriage of rails and fastenings from lower end of section, including all handling.....per ton.	1 00	3,000 00
30 Miles	Tracklaying.....per mile.	250 00	7,500 00
100,000 C. yards	Ballasting.....per c. yd.	0 40	40,000 00
20 No.	Setting points and crossings.....each.	40 00	800 00
2 do	Public road level crossings, comprising timber cattle-guards, planking, small timber culverts under approaches, and notice-boards, complete.....do	150 00	300 00
	To cover work which possibly may be required under clauses 18, 43 and 91 of General Specification, short quantities and contingencies—add, say, \$250,000.....		250,000 00
	Total.....		2,573,640 00

*NOTE.—Some of the quantities printed in this column are estimated from preliminary location measurements, and may be considered roughly approximate; other items are simply conjectured and are placed herein for the purpose of obtaining rates.

Payments.

24. Cash payments equal to about ninety per cent. of the value of the work done, approximately made up from returns of progress measurements and computed at the prices agreed upon or determined under the provisions of this contract, will be made to the contractors monthly on the written certificate of the engineer that the work for or on account of which the certificate is granted, has been duly executed to his satisfaction, and stating the value of such work computed as above mentioned—and upon approval of such certificate by the Minister, for the time being, and the said certificate and such approval thereof shall be a condition precedent to the right of the contractors to be paid the said ninety per cent. or any part thereof. The remaining ten per cent. shall be retained until the final completion of the whole work to the satisfaction of the Chief Engineer for the time being, having control over the work, and within two months after such completion the remaining ten per cent. will be paid. And it is hereby declared that the written certificate of the said engineer certifying to the final completion of said works to his satisfaction shall be a condition precedent to the right of the contractors to receive or be paid the said remaining ten per cent., or any part thereof.

Monthly Estimates.

25. It is intended that every allowance to which the contractors are fairly entitled will be embraced in the engineer's monthly certificates; but should the contractors at any time have claims of any description which they consider are not included in the progress certificates, it will be necessary for them to make and repeat such claims in writing to the engineer, within fourteen days after the date of each and every certificate in which they allege such claims to have been omitted.

Claims by Contractors.

26. The contractors, in presenting claims of the kind referred to in the last clause, must accompany them with satisfactory evidence of their accuracy, and the reason why they think they should be allowed. Unless such claims are thus made during the progress of the work, within fourteen days, as in the preceding clause, and repeated, in writing, every month, until finally adjusted or rejected, it must be clearly understood that they shall be forever shut out, and the contractors shall have no claim on Her Majesty in respect thereof.

Progress Measurements.

27. The progress measurements and progress certificates shall not in any respect be taken as an acceptance of the work or release of the contractors from responsibility in respect thereof, but they shall at the conclusion of the work deliver over the same in good order, according to the true intent and meaning of this contract.

Operations may be Suspended—Resumed.

28. Her Majesty shall have the right to suspend operations from time to time at any particular point or points or upon the whole of the works, and in the event of such right being exercised so as to cause any delay to the contractors, then an extension of time equal to such delay or detention, to be fixed by the Minister as above provided for, shall be allowed them to complete the contract, but no such delay shall vitiate or avoid this contract or any part thereof or the obligation hereby imposed or any concurrent or other Bond or Security for the performance of this contract, nor shall the contractors be entitled to any claim for damages by reason of any such suspension of operations. And at any time after operations have been suspended either in whole or part—such operations may be again resumed and again suspended, and

resumed, as Her Majesty may think proper. And upon the contractors receiving written notice on behalf of Her Majesty that the suspended operations are to be resumed, the contractors shall at once resume the operations and diligently carry on the same.

Appropriation by Parliament.

29. Should the amount now voted by Parliament and applicable towards payment for the work hereby contracted for, be at any time expended previous to the completion of the works, the Minister for the time being may give the contractors written notice to that effect. And upon receiving such notice the contractors may, if they think fit, stop the work—but in any case shall not be entitled to any payment for work done, beyond the amount voted and applicable as aforesaid—unless and until the necessary funds shall have been voted by Parliament in that behalf. And in no event shall the contractors have or make any claim upon Her Majesty for any damages or compensation by reason of the said suspension of payment, or by reason of any delay or loss caused by the stoppage of work.

Spirituous Liquors.

30. The contractors shall not permit, allow, or encourage the sale of any spirituuous liquors on or near the works.

No Sunday Labour.

31. No work whatever shall at any time or place be carried on during Sunday, and the contractors shall take all necessary steps for preventing any foreman, or agent, or men from working or employing others on that day.

Chief Engineer to be Arbitrator.

32. It is hereby agreed that all matters of difference arising between the parties hereto upon any matter connected with or arising out of this contract, the decision whereof is not hereby especially given to the engineer,—shall be referred to the award and arbitration of the Chief Engineer for the time being having control over the works, and the award of such engineer shall be final and conclusive; and it is hereby declared that such award shall be a condition precedent to the right of the contractors to receive or be paid any sum or sums on account, or by reason of such matters in difference.

33. It is distinctly declared that no implied contract of any kind whatsoever, by or on behalf of Her Majesty, shall arise or be implied from anything in this contract contained, or from any position or situation of the parties at any time, it being clearly understood and agreed upon that the express contracts, covenants and agreements herein contained and made by Her Majesty, are and shall be the only contracts, covenants and agreements upon which any rights against Her are to be founded.

34. This contract is hereby, pursuant to the provisions of the 8th section of the Statute, 41st Victoria (1878), chapter 5, made subject to the express condition that no Member of the House of Commons of Canada shall be admitted to any share or part of such contract, or to any benefit to arise therefrom.

Contract may be Cancelled.

35. In the event of it becoming advisable in the interests of the public to suspend the work hereby contracted for, or any portion thereof, at any time before its completion, and to put an end to this contract, the Minister for the time being shall have full power to stop the work and to cancel this contract, on giving due notice to that

effect to the contractors. The contractors, however, will be entitled to receive payment for all sums then due for work already done, materials used or delivered, or ready to be used, or in course of preparation, together with such reasonable compensation as will cover all *bond fide* damages, if any, resulting therefrom, and as may then be agreed upon; or, in case of disagreement, as may be determined by the Official Arbitrators of the Dominion of Canada; it being understood, however, that no compensation will be allowed to or claimed by the contractors for materials procured for the works, after the date of the service of the notice above referred to, or for any loss of anticipated profits, either in respect of the works so suspended as aforesaid, or of the materials then procured for said works.

IN WITNESS whereof, the contractors have hereto set their hands and seals and these presents have been signed and sealed by the said Minister, and countersigned by the Secretary of the Department of Railways and Canals, on behalf of Her Majesty.

Signed, sealed and delivered by the
contractors in presence of
(Signed) F. H. ENNIS,
as to signature "PATRICK PURCELL,"
per H. RYAN,
and in presence of
(Signed) H. A. FISSIAULT,
by "HUGH RYAN," "JAMES GOODWIN,"
and "JAMES N. SMITH,
per JAMES GOODWIN, his Attorney."

(Signed)
PATRICK PURCELL, [L.S.]
per H. RYAN.
HUGH RYAN, [L.S.]
JAMES GOODWIN, [L.S.]
JAMES N. SMITH, [L.S.]
per JAMES GOODWIN,
his Attorney.

Signed, sealed and delivered by the
Minister, and countersigned by the
Secretary in the presence of
(Signed) H. A. FISSIAULT.

(Signed) CHARLES TUPPER,
Minister of Railways and Canals.
(Signed) F. BRAUN,
Secretary. [L.S.]

SURETIES' INDENTURE.

THIS INDENTURE, made the tenth day of February, one thousand eight hundred and eighty, between EDWARD GRIFFIN, Gentleman, and ALEXANDER MORTIMER, Bookbinder, both of the City of Ottawa, in the Province of Ontario, hereinafter called "The Sureties," of the first part, and Her Majesty Queen Victoria, of the second part.

WITNESSETH, that the sureties hereby for themselves, and each of them, their and each of their heirs, executors and administrators, jointly and severally, covenant with Her Majesty and Her Successors, that the contractors named in the hereunto annexed Indenture, their executors and administrators, shall and will from time to time, and at all times, well and truly perform, keep and abide by all and singular the covenants, agreements and conditions in said Indenture contained, and on their part to be performed, kept and abided by. And the sureties, further, covenant and agree with Her Majesty and Her Successors, that all the rights, privileges and powers which may, by virtue of the said Indenture, be exercised by or on behalf of Her Majesty, or by the engineer or engineers, or other persons mentioned in said Indenture, may be so exercised without notice to the said sureties, and without in any way releasing or interfering with the liability of the sureties under their covenants herein contained.

In witness whereof, the parties hereto have hereunto set their hands and seals.

Signed, sealed and delivered
in presence of
(Signed) F. H. ENNIS.

(Signed) EDWARD GRIFFIN. [Seal.]
(Signed) A. MORTIMER. [Seal.]

THIS INDENTURE, made the twenty third day of December, one thousand eight hundred and seventy-nine, between ANDREW ONDERDONK, of San Francisco, in the State of California, one of the United States of North America, Contractor and Civil Engineer, hereafter called "the Contractor," of the first part, and Her Majesty Queen Victoria, represented herein by the Minister of Railways and Canals, of the second part, WITNESSETH, that in consideration of the covenants and agreements on the part of Her Majesty hereinafter contained, the contractor covenants and agrees with Her Majesty as follows:—

Work.—Engineer.

1. In this contract the word "work" or "works" shall, unless the context require a different meaning, mean the whole of the work and the materials, matters and things required to be done, furnished and performed by the contractor under this contract. The word "engineer" shall mean the chief engineer for the time being having control over the work, and shall extend to and include any of his assistants acting under his instructions, and all instructions or directions, or certificates given or decisions made by any one acting for the chief engineer, shall be subject to his approval, and may be cancelled, altered, modified and changed, as to him may seem fit.

On whom Binding.

2. All covenants and agreements herein contained shall be binding on and extend to the executors and administrators of the contractor, and shall extend to and be binding upon the successors of Her Majesty, and wherever in this contract Her Majesty is referred to, such reference shall include her successors, and wherever the contractor is referred to, such reference shall include his executors and administrators.

Labour, Plant and Material.—Time for Completion.

3 That the contractor will, at his own expense, provide all and every kind of labour, machinery and other plant, materials, articles and things whatsoever necessary for the due execution and completion of all and every the works set out or referred to in the general specifications hereunto annexed, dated 30th November, 1878, and marked A, and set out or referred to in the plans and drawings prepared and to be prepared for the purposes of the work, and in accordance with the printed memorandum herewith annexed, marked B, and will execute and fully complete the respective portions of such works and deliver the same complete to Her Majesty, on or before the thirty-first day of December, A.D. one thousand eight hundred and eighty-four.

Materials and Workmanship.

The said work to be constructed of the best materials of their several kinds, and finished in the best and most workmanlike manner, in the manner required by and in strict conformity with the said specifications and drawings which may from time to time be furnished (which said specifications are hereby declared to be part of this contract), and to the complete satisfaction of the chief engineer for the time being having control over the work.

Omissions to be Made Good.

4. The aforesaid specification and memorandum and the several parts of this contract shall be taken together, to explain each other, and to make the whole consistent; and if it be found that anything has been omitted or mis-stated, which is necessary for the proper performance and completion of any part of the work con-

templated, the contractor will, at his own expense, execute the same as if it had been properly described, and the decision of the engineer shall be final as to any such error or omission, and the correction of any such error or omission shall not be deemed to be an addition to or deviation from the works hereby contracted for.

Engineer may order Extra Work and Make Changes.

5. The chief engineer, with the sanction of the Minister of Railways and Canals, shall be at liberty, at any time, either before the commencement or during the construction of the works or any portion thereof, to order any work to be done, and to make any changes which he may deem expedient in the grades, the width of cuttings and fillings, the dimensions, character, nature, location or position of the works, or any part or parts thereof, or in any other thing connected with the works, whether, or not, such changes diminish the work to be done, or the cost of doing the same, and the contractor shall immediately comply with all written requisitions of the engineer in that behalf, but the contractor shall not make any change in or addition to, or omission, or deviation from the works, unless directed by the engineer, and shall not be entitled to any payment for any change, addition or deviation, unless such change, addition, omission or deviation shall have been first directed in writing by the engineer, and notified to the contractor in writing, nor unless the price to be paid for any additional work, shall have been previously fixed by the Minister in writing, and the decision of the engineer as to whether any such change or deviation increases or diminishes the cost of the work, and as to the amount to be paid or deducted as the case may be in respect thereof, shall be final, and the obtaining of his certificate shall be a condition precedent to the right of the contractor to be paid therefor. If any such change or alteration constitutes, in the opinion of the said engineer, a deduction from the works, his decision as to the amount to be deducted on account thereof, shall be final and binding.

Changes shall not Invalidate Contract.

6. That all the clauses of this contract shall apply to any changes, additions or deviations, in like manner, and to the same extent, as to the works at present projected, and no changes, additions, deviations or variations shall annul or invalidate this contract.

Limit of Expenditure under this Contract.

7. It being the intention that the cost of the work to be done under this contract be limited to the sum of Two Millions Fifty-six Thousand Nine Hundred and Fifty Dollars, lawful money of Canada, which sum is to be taken as the maximum amount of this contract, not to be exceeded; it is hereby specially agreed that should it, at any time during the execution of the said work, appear from the cost of the work then performed, as compared with the value of the works still to be done, that such maximum amount will be exceeded, whether by reason of additions, alterations, variations, for any other cause whatsoever, the contractor will then be required to complete only such portion of the works herein contemplated as will be indicated by the engineer, with the view to limit the total expenditure under this contract to the maximum above stated; and so soon as the said maximum amount will be expended, this contract will then be considered as ended, and the contractor will not thereafter be entitled to continue the works under this contract, or to receive any further payment beyond the said maximum amount, unless the Minister should authorize and direct further expenditure; in which case, it is understood that the Minister will have the right (which is hereby expressly reserved) to direct that any works, which may then remain to be done, shall be executed under this contract; and the contractor hereby agrees to execute the same at the rates or prices hereinafter mentioned, as if these remaining works formed part of this contract. Provided also, that in case the

said works, on completion, by reason of alterations, variations, deviations, diminutions, omissions, or otherwise, should not amount to the total sum above mentioned, the contractor will not be entitled to the payment of the difference in cost, whatsoever the same may be. No compensation shall, in any case, be claimable by the contractor for any loss of anticipated profits.

Engineer to be sole judge of Work, Material, &c.

8. That the engineer shall be the sole judge of work and material in respect of both quantity and quality, and his decision on all questions in dispute with regard to work or material, or as to the meaning or intention of this contract and the plans, specifications and drawings shall be final, and no works or extra or additional works or changes shall be deemed to have been executed, nor shall the contractor be entitled to payment for the same, unless the same shall have been executed to the satisfaction of the engineer, as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the contractor to be paid therefor.

Schedule of Prices.

9. It is hereby distinctly understood and agreed, that the respective portions of the works set out or referred to in the list or Schedule of Prices to be paid for the different kinds of work, include not merely the particular kind of work or materials mentioned in said list or schedule, but also all and every kind of work, labor, tools, and plant, materials, articles and things whatsoever necessary for the full execution and completing ready for use of the respective portions of the works to the satisfaction of the engineer. And in case of dispute as to what work, labor, materials, tools and plant are or are not so included, the decision of the engineer shall be final and conclusive.

Foreman.

10. A competent foreman is to be kept on the ground by the contractor during all the working hours, to receive the orders of the engineer, and should the person so appointed be deemed by the engineer incompetent, or conduct himself improperly, he may be discharged by the engineer, and another shall at once be appointed in his stead; such foreman shall be considered as the lawful representative of the contractor, and shall have full power to carry out all requisitions and instructions of the said engineer.

Unsuitable Material or Imperfect Work.

11. In case any material, or other things in the opinion of the engineer not in accordance with the said several parts of this contract, or not sufficiently sound or otherwise unsuitable for the respective works, be used for or brought to the intended works, or any part thereof, or in case any work be improperly executed, the engineer may require the contractor to remove the same, and to provide proper material or other things, or properly re-execute the work, as the case may be, and thereupon the contractor shall and will immediately comply with the said requisition, and if twenty-four hours shall elapse and such requisition shall not have been complied with, the Engineer may cause such material, or other things, or such work, to be removed; and in any such case the contractor shall pay to Her Majesty all such damages and expenses as shall be incurred in the removal of such material, materials, or other things, or of such work; or Her Majesty may, in Her discretion, retain and deduct such damages and expenses from any amounts payable to the contractor.

All Plant and Material to become Property of Her Majesty.

12. All machinery and other plant, materials and things whatsoever, provided by the contractor for the works hereby contracted for, and not rejected under the

provisions of the last preceding clause, shall from the time of their being so provided become, and until the final completion of the said works, shall be the property of Her Majesty for the purposes of the said works, and the same shall on no account be taken away, or used or disposed of except for the purposes of the said works, without the consent in writing of the Engineer, and Her Majesty shall not be answerable for any loss or damage whatsoever which may happen to such machinery or other plant, material or things, provided always that upon the completion of the works and upon payment by the contractor of all such moneys, if any, as shall be due from him to Her Majesty, such of the said machinery and other plant, material and things as shall not have been used and converted in the works, and shall remain undisposed of, shall, upon demand, be delivered up to the contractor.

Insufficient Machinery.—Material or Labor to be Increased.

13. If the Engineer at any time shall consider the number of workmen, horses, or quantity of machinery or other plant, or the quantity of proper materials, respectively, employed or provided by the contractor on or for the said works, to be insufficient for the advancement thereof towards completion within the limited times, or that the works are, or some part thereof is not being carried on with due diligence, then in every such case the said Engineer may, by written notice to the contractor, require him to employ or provide such additional workmen, horses, machinery or other plant, or materials, as the Engineer may think necessary, and in case the contractor shall not thereupon within three days, or such other longer period as may be fixed by any such notice, in all respects comply therewith, then the Engineer may, either on behalf of Her Majesty, or if he see fit, may, as the agent of and on account of the contractor, but in either case at the expense of the contractor, provide and employ such additional workmen, horses, machinery and other plant, or any thereof or such additional and materials respectively, as he may think proper, and may pay such additional workmen such wages, and for such additional horses, machinery or other plant and materials, respectively, such prices as he may think proper, and all such wages and prices, respectively, shall thereupon at once be repaid by the contractor, or the same may be retained and deducted out of any moneys at any time payable to the contractor; and Her Majesty may use, in the execution or advancement of the said work, not only the horses, machinery and other plant and materials so in any case provided by anyone on Her behalf, but also all such as may have been or may be provided by or on behalf of the said contractor.

Delay in Execution.—Work may be taken out of Contractor's Hands.

14. In case the contractor shall make default or delay in diligently continuing to execute or advance the works to the satisfaction of the Engineer and such default or delay shall continue for six days after notice in writing shall have been given by the Engineer to the contractor requiring him to put an end to such default or delay, or in case the contractor shall become insolvent, or make an assignment for the benefit of creditors, or neglect either personally or by a skilful and competent agent to superintend the works, then in any of such cases Her Majesty may take the work out of the contractor's hands and employ such means as she may see fit to complete the work, and in such cases the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works, and all materials and things whatsoever, and all horses, machinery, and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

Contractor to take risk of all loss or damage.

15. The contractor shall be at the risk of, and shall bear all loss or damage whatsoever, from whatsoever cause arising, which may occur to the works, or any of them, until the same be fully and finally completed and delivered up to and accepted by the said Minister for the time being, and if any such loss or damage occur before such final completion, delivery and acceptance, the contractor shall immediately, at his own expense, repair, restore and re-execute the work so damaged, so that the whole works, or the respective parts thereof, may be completed within the time hereby limited.

Contractor to have no claim for delay.

16. The contractor shall not have or make any claim or demand, or bring any action or suit or petition against Her Majesty for any damage which he may sustain by reason of any delay in the progress of the work, arising from the acts of any of Her Majesty's agents, and it is agreed that in the event of any such delay, the contractors shall have such further time for the completion of the works as may be fixed in that behalf by the Minister for the time being.

Contractor not to make assignment.—Work may be taken out of Contractor's hands.

17. The contractor shall not make any assignment of this contract, or any sub-contract, for the execution of any of the works hereby contracted for, and in any event no such assignment or sub-contract, even though consented to, shall exonerate the contractor from liability under this contract, for the due performance of all the work hereby contracted for. In the event of any such assignment or sub-contract being made; then the contractor shall not have or make any claim or demand upon Her Majesty for any future payments under this contract for any further or greater sum or sums than the sum or sums respectively at which the work or works so assigned or sub-contracted for shall have been undertaken to be executed by the assignee or sub-contractor, and in the event of any such assignment or sub-contract being made without such consent, Her Majesty may take the work out of the contractor's hands, and employ such means as she may see fit to complete the same, and in such case the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and all things whatsoever, and all horses, machinery, and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes, and according to the provisions and conditions contained in the twelfth clause hereof.

18. Time shall be deemed to be of the essence of this contract.

Contractors responsible for damage.

19. The contractor shall be responsible for all damages claimable by any person or corporation whatsoever, in respect of any injury to persons or to lands, buildings, ships, or other property, or in respect of any infringement of any right whatsoever, occasioned by the performance of the said works, or by any neglect or misfeasance or non-misfeasance on his part, and shall and will at his own expense, make such temporary provisions as may be necessary for the protection of persons, or of lands, buildings, ships, or other property, or for the uninterrupted enjoyment of all rights of persons or corporations in and during the performance of the said works.

Failing to pay salaries or wages.

20. If the contractor fail at any time in paying the salaries or wages of any person employed by him upon or in respect of the said works, or any of them, and

any part of such salary be one month in arrear, or if there be due to any such person one month's wages or salary, the Engineer may notify the contractor to pay such salary or wages, and if two days elapse and the same be not paid in full up to the date of payment, or to such other date as may be in accordance with the terms of employment of such person, then Her Majesty may pay to such person salary or wages from any date to any date, and to any amount which may be payable, and may charge the same to the contractor, and the contractor covenants with Her Majesty to repay at once any and every sum so paid.

Stakes and marks to be protected.

21. The contractor will protect and will not remove or destroy or permit to be removed or destroyed, the stakes, buoys, and other marks placed on or about the said works by the Engineers of the works, and shall furnish the necessary assistance to correct or replace any stake or mark which through any cause may have been removed or destroyed.

Contractor's address.

22. Any notice or other communication mentioned in this contract to be notified or given to the contractors, shall be deemed to be well and sufficiently notified or given, if the same be left at the contractor's office or mailed in any post office, to the contractor or foreman, addressed to the address mentioned in the contract, or to the contractor's last known place of business.

Schedule of prices.

23. And Her Majesty, in consideration of the premises, hereby covenants with the contractor, and he will be paid for, and in respect of the works hereby contracted for, and in the manner set out in the next clause hereof the several prices or sums following, viz.,:

SCHEDULE OF QUANTITIES AND PRICES.

*Approximate Quantities.	Description of Work.	Rates.	Amount.
		\$ cts.	\$ cts.
200 Acres	Clearing..... per acre	40 00	8,000 00
10; do	Blose cutting..... do	50 00	500 00
10; do	Grubbing..... do	100 00	1,000 00
10,000 L. feet	Fencing..... per l. ft.	0 05	500 00
200,000 C. yards	Solid rock excavation..... per c. yd.	1 60	320,000 00
100,000 do	Loose rock excavation..... do	0 80	80,000 00
2,500,000 do	Earth excavation (including that described in clause 12 of Specification)..... do	0 30	750,000 00
2,000 L. feet	Under-drains..... per l. ft.	0 40	800 00
	Tunnelling (See clause 32 of Specification).		
Say 400 do	"Line Tunnels"..... do	105 00	42,000 00
15,000 C. yards	Bridge masonry..... per c. yd.	12 00	180,000 00
10,000 do	Culvert masonry..... do	7 00	70,000 00
30,000 do	Dry masonry (retaining-walls, etc)..... do	4 00	120,000 00
1,000 do	Paving..... do	3 00	3,000 00
1,000 do	Concrete..... do	6 00	6,000 00
20,000 do	Rip-rap..... do	2 00	40,000 00

SCHEDULE OF QUANTITIES AND PRICES—Continued.

*Approximate Quantities.	Description of Work.	Rates.	Amount.
		\$ cts.	\$ cts.
500 L. feet	Cast-iron pipes, 3ft. diameter inside, lin. thick, laid in concrete (the concrete not included in this item)..... per l. ft.	10 00	5,000 00
1,000 C. yards	Hand-laying rock embankments, where slopes are steeper than 1 to 1 (labour only)..... per c. yd.	1 00	1,000 00
2 No.	Timber bridge superstructure, 150 ft. clear. per span	7,500 00	15,000 00
19 do	do do 100 do do do	4,000 00	76,000 00
1 do	do do 60 do do do	2,100 00	2,100 00
2 do	do do 50 do do do	2,100 00	4,200 00
1 do	do do 40 do do do	1,400 00	1,400 00
1 do	do do 30 do do do	1,400 00	1,400 00
(See clauses 42 and 43 of Specification.)			
1,000 L. feet	Timber, best quality, for beam-culverts, &c. : 12 ft. x 16 ft. per l. ft.	0 40	400 00
5,000 do	12 ft. x 12 ft. do	0 40	2,000 00
1,000 do	8 ft. x 16 ft. do	0 30	300 00
1,000 do	8 ft. x 12 ft. do	0 30	300 00
Other dimensions of timber (if required to be used) at proportionate prices.			
10,000 do	Piles driven (See clause 40 of Specification)..... do	0 40	4,000 00
10,000 do	Round timber for crib-wharfing, &c., not less than 12in. diameter..... do	0 25	2,500 00
10,000 do	Flatted timber in road diversion culverts, &c., 12in. thick..... do	0 30	3,000 00
20,000 F. B.M.	Plank..... per M.	25 00	500 00
3,000 Lbs.	Wrought-iron..... per lb.	0 20	600 00
500 do	Cast-iron..... do	0 20	100 00
75,000 No.	Ties..... each	0 30	22,500 00
3,000 Tons.	Carriage of rails and fastenings from lower end of section, including all handling..... per ton	1 00	3,000 00
30 Miles	Tracklaying..... per mile	300 00	9,000 00
100,000 C. yards	Ballasting..... per c. yd.	0 30	30,000 00
20 No.	Setting points and crossings..... each	25 00	500 00
7 do	Public road level crossings, comprising timber cattle-guards, planking, small timber culvert under approaches and notice-boards, complete do	50 00	350 00
.....	To cover work which possibly may be required under clauses 18, 43 and 91 of General Specification; short quantities, cofferdams and contingencies, add, say, \$250,000		250,000 00
Total			2,056,950 00

* NOTE.—Some of the quantities printed in this column are estimated from preliminary location measurements and may be considered roughly approximate; other items are simply conjectured and placed herein for the purpose of obtaining rates.

Payments.

24. Cash payments equal to about ninety per cent. of the value of the work done, approximately made up from returns of progress measurements and computed at the prices agreed upon or determined under the provisions of this contract, will be made

to the contractor monthly, on the written certificate of the engineer that the work for or on account of which the certificate is granted, has been duly executed to his satisfaction, and stating the value of such work computed as above mentioned—and upon approval of such certificate by the Minister for the time being, and the said certificate and such approval thereof shall be a condition precedent to the right of the contractor to be paid the said, ninety per cent. or any part thereof. The remaining ten per cent shall be retained until the final completion of the whole work to the satisfaction of the chief engineer for the time being, having control over the work, and within two months after such completion the remaining ten per cent will be paid. And it is hereby declared that the written certificate of the said engineer, certifying to the final completion of said works to his satisfaction, shall be a condition precedent to the right of the contractor to receive or be paid the said remaining ten per cent., or any part thereof.

Monthly Estimates.

25. It is intended that every allowance to which the contractor is fairly entitled, will be embraced in the engineer's monthly certificates; but should the contractor at any time have claims of any description which he considers are not included in the progress certificates, it will be necessary for him to make and repeat such claims in writing to the engineer, within fourteen days after the date of each and every certificate in which he alleges such claims to have been omitted.

Claims by Contractors.

26. The contractor, in presenting claims of the kind referred to in the last clause, must accompany them with satisfactory evidence of their accuracy, and the reason why he thinks they should be allowed. Unless such claims are thus made during the progress of the work, within fourteen days, as in the preceding clause, and repeated, in writing, every month, until finally adjusted or rejected, it must be clearly understood that they shall be forever shut out, and the contractor shall have no claim on Her Majesty in respect thereof.

Progress Measurements.

27. The progress measurements and progress certificates shall not in any respect be taken as an acceptance of the work or release of the contractor from responsibility in respect thereof, but he shall at the conclusion of the work deliver over the same in good order, according to the true intent and meaning of this contract.

Operations may be Suspended.—Resumed.

28. Her Majesty shall have the right to suspend operations from time to time at any particular point or points, or upon the whole of the works, and in the event of such right being exercised so as to cause any delay to the contractor, then an extension of time equal to such delay or detention, to be fixed by the Minister as above provided for, shall be allowed him to complete the contract, but no such delay shall vitiate or avoid this contract or any part thereof, or the obligation hereby imposed or any concurrent or other bond or security for the performance of this contract, nor shall the contractor be entitled to any claim for damages by reason of any such suspension of operations. And at any time after operations have been suspended either in whole or in part—such operations may be again resumed and again suspended and resumed as Her Majesty may think proper. And upon the contractor receiving written notice, on behalf of Her Majesty, that the suspended operations are to be resumed, the contractor shall at once resume the operations and diligently carry on the same.

Appropriation by Parliament.

29. Should the amount now voted by Parliament, and applicable towards payment for the work hereby contracted for, be at any time expended previous to the completion of the works, the Minister for the time being, may give the contractor written notice to that effect; and upon receiving such notice the contractor may, if he thinks fit, stop the work—but in any case shall not be entitled to any payment for work done, beyond the amount voted and applicable as aforesaid—unless and until the necessary funds have been voted by Parliament in that behalf. And in no event shall the contractor have or make any claim upon Her Majesty for any damages or compensation by reason of the said suspension of payment, or by reason of any delay or loss caused by the stoppage of work.

Spirituous Liquors.

30. The contractor shall not permit, allow, or encourage the sale of any spirituous liquors on or near the works.

No Sunday Labour.

31. No work whatever shall at any time or place be carried on during Sunday, and the contractor shall take all necessary steps for preventing any foreman, or agent, or men from working or employing others on that day.

Chief Engineer to be Arbitrator.

32. It is hereby agreed, that all matters of difference arising between the parties hereto, upon any matter connected with or arising out of this contract, the decision whereof is not hereby especially given to the engineer,—shall be referred to the award and arbitration of the chief engineer for the time being, having control over the works, and the award of such engineer shall be final and conclusive; and it is hereby declared that such award shall be a condition precedent to the right of the contractor to receive or be paid any sum or sums on account, or by reason of such matters in difference.

33. It is distinctly declared that no implied contract of any kind whatsoever, by or on behalf of Her Majesty, shall arise or be implied from anything in this contract contained, or from any position or situation of the parties at any time, it being clearly understood and agreed that the express contracts, covenants and agreements herein contained and made by Her Majesty, are and shall be the only contracts, covenants and agreements upon which any rights against her are to be founded.

34. This contract is hereby, pursuant to the provisions of the 8th section of the Statute, 41st Victoria (1878), chapter 5, made subject to the express condition that no Member of the House of Commons of Canada shall be admitted to any share or part of such contract, or to any benefit to arise therefrom.

Contract may be Cancelled.

35. In the event of it becoming advisable, in the interests of the public, to suspend the work hereby contracted for, or any portion thereof, at any time before its completion, and to put an end to this contract, the Minister for the time being, shall have full power to stop the work and to cancel this contract, on giving due notice to that effect to the contractor. The contractor, however, will be entitled to receive payment for all sums then due for work already done, materials used or delivered, or ready to be used, or in course of preparation, together with such reasonable compensation as will cover all *bond fide* damages, if any, resulting therefrom, and as may then be agreed upon; or, in case of disagreement, as may be determined by the official arbitrators of the Dominion of Canada; it being understood, however, that no compensation will be allowed to, or claimed by, the contractor for materials procured for the

works, after the date of the service of the notice above referred to, or for any loss of anticipated profits, either in respect of the works so suspended as aforesaid, or of the materials then procured for said works.

IN WITNESS whereof, the contractor hath hereto set his hand and seal—and these presents have been signed and sealed by the said Minister, and countersigned by the Secretary of the Department of Railways and Canals, on behalf of Her Majesty.

Signed, sealed and delivered by the
contractor in the presence of } (Signed) ANDREW ONDERDONK, (L. S.)
(Signed) H. A. FISSIAULT.

Signed, sealed and delivered by the } (Signed) CHARLES TUPPER, (L. S.)
the Minister, and countersigned by } *Minister of Railways and Canals.*
by the Secretary in the presence of } (Signed) F. BRAUN.
(Signed) H. A. FISSIAULT. } *Secretary.*

SURETIES' INDENTURE.

THIS INDENTURE, made the twenty-third day of December, one thousand eight hundred and seventy-nine, between DUNCAN MACDONALD, of the City of Montreal, in the Province of Quebec, Contractor, and ANGUS PETER MACDONALD, of the same place, Contractor, hereinafter called "The Sureties," of the first part, and Her Majesty Queen Victoria, of the second part.

WITNESSETH that the sureties hereby for themselves, and each of them, their and each of their heirs, executors and administrators, jointly and severally, covenant with Her Majesty and Her Successors, that the contractor named in the hereunto annexed Indenture, his executors and administrators, shall and will from time to time, and at all times, well and truly perform, keep and abide by all and singular the covenants, agreements and conditions in said Indenture contained, and on his part to be performed, kept and abided by. And the sureties, further, covenant and agree with Her Majesty and Her Successors, that all the rights, privileges and powers which may, by virtue of the said Indenture, be exercised by or on behalf of Her Majesty; or by the engineer or engineers, or other persons mentioned in said Indenture, may be so exercised without notice to the said sureties, and without in any way releasing or interfering with the liability of the sureties under their covenants herein contained.

In witness whereof, the parties hereto have hereunto set their hands and seals.

Signed, sealed and delivered
in presence of } (Signed) DUNCAN MACDONALD, (L.S.)
(Signed) H. A. FISSIAULT. } A. P. MACDONALD. (L.S.)

THIS INDENTURE made the fifteenth day of December, one thousand eight hundred and seventy-nine, between ANDREW ONDERDONK, of San Francisco, in the State of California, one of the United States of North America, Contractor and Civil Engineer, hereafter called "the Contractor" of the first part, and Her Majesty Queen Victoria represented herein by the Minister of Railways and Canals, of the second part, WITNESSETH, that in consideration of the covenants and agreements on the part of Her Majesty hereinafter contained, the contractor covenants and agrees with Her Majesty as follows :

Work.—Engineer.

1. In this contract the word "work" or "works" shall, unless the context require a different meaning, mean the whole of the work and the materials, matters and things required to be done, furnished and performed by the contractor under this contract. The word "engineer," shall mean the chief engineer for the time being having control over the work, and shall extend to and include any of his assistants acting under his instructions, and all instructions or directions, or certificates given, or decisions made by any one acting for the chief engineer, shall be subject to his approval, and may be cancelled, altered, modified and changed, as to him may seem fit.

On whom Binding.

2. All covenants and agreements herein contained shall be binding on and extend to the executors and administrators of the contractor, and shall extend to and be binding upon the successors of Her Majesty, and wherever in this contract Her Majesty is referred to, such reference shall include her successor, and wherever the contractor is referred to, such reference shall include his executors and administrators.

Labor, Plant and Material.—Time for Completion.—Materials and Workmanship.

3. That the contractor will, at his own expense, provide all and every kind of labor, machinery and other plant, materials, articles, and things whatsoever necessary for the due execution and completion of all and every the works set out or referred to in the general specifications hereunto annexed, dated 30th November, 1878, and marked A, and set out or referred to in the plans and drawings prepared and to be prepared for the purposes of the work, and in accordance with the printed memorandum herewith annexed, marked B, and will execute and fully complete the respective portions of such works and deliver the same complete to Her Majesty, on or before the thirtieth day of June, A.D., eighteen hundred and eighty-five. The said work to be constructed of the best materials of their several kinds, and finished in the best and most workmanlike manner, in the manner required by and in strict conformity with the said specifications and drawings which may from time to time be furnished (which said specifications and memorandum are hereby declared to be part of this contract); and to the complete satisfaction of the chief engineer for the time being having control over the work.

Omissions to be made Good.

4. The aforesaid specification and memorandum, and the several parts of this contract shall be taken together, to explain each other, and to make the whole consistent; and if it be found that anything has been omitted or mis-stated, which is necessary for the proper performance and completion of any part of the work contemplated, the contractor will, at his own expense, execute the same as if it had been properly described, and the decision of the engineer shall be final as to any such error or omission, and the correction of any such error or omission, shall not be deemed to be an addition to, or deviation from, the works hereby contracted for.

Engineer may order extra work, and make changes.

5. The chief engineer, with the sanction of the Minister, shall be at liberty at any time, either before the commencement or during the construction of the works or any portion thereof, to order any work to be done, and to make any changes which he may deem expedient in the grades, the width of cuttings and fillings, the dimensions, character, nature, location, or position of the works, or any part or parts thereof, or in any other thing connected with the works, whether or not such changes diminish the work to be done, or the cost of doing the same, and the contractor shall immediately comply with all written requisitions of the engineer in that behalf, but the contractor shall not make any change in or addition to, or omission, or deviation from the works, unless directed by the engineer, and shall not be entitled to any payment for any change, addition, or deviation, unless such change, addition, omission, or deviation, shall have been first directed in writing by the Engineer, and notified to the contractor in writing, nor unless the price to be paid for any additional work shall have been previously fixed by the Minister in writing, and the decision of the Engineer as to whether any such change or deviation increases or diminishes the cost of the work, and as to the amount to be paid or deducted, as the case may be in respect thereof, shall be final, and the obtaining of his certificate shall be a condition precedent to the right of the contractor to be paid therefor. If any such change or alteration constitutes, in the opinion of the said engineer, a deduction from the works, his decision as to the amount to be deducted on account thereof shall be final and binding.

Changes shall not Invalidate Contract.

6. That all the clauses of this contract shall apply to any changes, additions, or deviations, in like manner, and to the same extent, as to the works at present projected, and no changes, additions, deviations or variations shall annul or invalidate this contract.

Limit of Expenditure under this Contract.

7. It being the intention that the cost of the work to be done under this contract be limited to the sum of One Million Seven Hundred and Forty-six Thousand One Hundred and Fifty Dollars, which sum is to be taken as the maximum amount of this contract, not to be exceeded; it is hereby specially agreed that should it, at any time during the execution of the said work, appear from the cost of the work then performed, as compared with the value of the works still to be done, that such maximum amount will be exceeded, whether by reason of additions, alterations, variations, for any other cause whatsoever, the contractor will then be required to complete only such portion of the works herein contemplated as will be indicated by the engineer, with the view to limit the total expenditure under this contract to the maximum above stated; and so soon as the said maximum amount will be expended, this contract will then be considered as ended, and the contractor will not thereafter be entitled to continue the works under this contract, or to receive any further payment beyond the said maximum amount, unless the Minister should authorize and direct further expenditure; in which case, it is understood that the Minister will have the right (which is hereby expressly reserved) to direct that any works, which may then remain to be done, shall be executed under this contract; and the contractor hereby agrees to execute the same at the rates or prices hereinafter mentioned, as if these remaining works formed part of this contract. Provided also, that in case the said works, on completion, by reason of alterations, variations, deviations, diminutions, omissions, or otherwise, should not amount to the total sum above mentioned, the contractor will not be entitled to the payment of the difference in cost, whatsoever the same may be. No compensation shall, in any case, be claimable by the contractor for any loss of anticipated profits.

Engineer to be sole Judge of Work, Material, &c.

8. That the Engineer shall be the sole judge of work and material in respect of both quantity and quality, and his decision on all questions in dispute with regard to work or material, or as to the meaning or intention of this contract and the plans, specifications and drawings shall be final, and no works or extra or additional works or changes shall be deemed to have been executed, nor shall the contractor be entitled to payment for the same, unless the same shall have been executed to the satisfaction of the engineer, as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the contractor to be paid therefor.

Schedule of Prices.

9. It is hereby distinctly understood and agreed, that the respective portions of the works set out or referred to in the list or schedule of prices to be paid for the different kinds of work, include not merely the particular kind of work or materials mentioned in said list or schedule, but also all and every kind of work, labor, tools, and plant materials, articles, and things whatsoever necessary for the full execution and completing ready for use of the respective portions of the works to the satisfaction of the Engineer. And in case of dispute as to what work, labor, materials, tools, and plant are or are not so included, the decision of the engineer shall be final and conclusive.

Foreman.

10. A competent foreman is to be kept on the ground by the contractor during all the working hours, to receive the orders of the engineer, and should the person so appointed be deemed by the Engineer to be incompetent, or conduct himself improperly, he may be discharged by the Engineer, and another shall at once be appointed in his stead; such foreman shall be considered as the lawful representative of the Contractor, and shall have full power to carry out all requisitions and instructions of the said engineer.

Unsuitable Material or Imperfect Work.

11. In case any material, or other things in the opinion of the engineer not in accordance with the said several parts of this contract, or not sufficiently sound or otherwise unsuitable for the respective works, be used for or brought to the intended works, or any part thereof, or in case any work be improperly executed, the engineer may require the Contractor to remove the same, and to provide proper material or other things, or properly re-execute the work, as the case may be, and thereupon the contractor shall and will immediately comply with the said requisition, and if twenty-four hours shall elapse and such requisition shall not have been complied with, the engineer may cause such material, or other things, or such work, to be removed; and in any such case the contractor shall pay to Her Majesty all such damages and expense as shall be incurred in the removal of such material, materials, or other things, or of such work; or Her Majesty may, in her discretion, retain and deduct such damages and expenses from any amounts payable to the contractor.

All Plant and Material to Become Property of Her Majesty.

12. All machinery and other plant, materials, and things whatsoever, provided by the contractor for the works hereby contracted for, and not rejected under the provisions of the last preceding clause, shall from the time of their being so provided become, and until the final completion of the said works, and the same shall, on no account, be taken away, or used or disposed of, except for the purposes of the said works, without the consent, in writing, of the engineer, and Her Majesty shall not

be answerable for any loss or damage whatsoever which may happen to such machinery, or other plant, material or things, provided always that upon the completion of the works, and upon payment by the contractor of all such moneys, if any, as shall be due from him to Her Majesty such of the said machinery and other plant, material and things as shall not have been used and converted in the works, and shall remain undisposed of shall, upon demand, be delivered up to the Contractor.

Insufficient Machinery.—Material or Labor to be Increased.

13. If the engineer shall, at any time, consider the number of workmen, horses, or quantity of machinery or other plant, or the quantity of proper materials, respectively, employed or provided by the contractor, on or for the said works, to be insufficient for the advancement thereof towards completion within the limited times, or that the works are, or some part thereof, is not being carried on with due diligence, then in every such case the said engineer may, by written notice to the contractor, require him to employ or provide such additional workmen, horses, machinery, or other plant or materials, as the engineer may think necessary, and in case the Contractor shall not thereupon within three days, or such other longer period as may be fixed by any such notice, in all respects comply therewith, when the engineer may, either on behalf of Her Majesty, or if he see fit, may, as the agent of and on account of the Contractor, but in either case at the expense of the Contractor, provide and employ such additional workmen, horses, machinery, and other plant, or any thereof, or such additional materials respectively, as he may think proper, and may pay such additional workmen such wages, and for such additional horses, machinery or other plant, and materials respectively, such prices as he may think proper, and all such wages and prices respectively, shall thereupon at once be repaid by the Contractor, or the same may be retained and deducted out of any moneys at any time payable to the Contractor; and Her Majesty may use, in the execution or advancement of the said work, not only the horses, machinery, and other plant, and materials so in any case provided by any one on Her behalf, but also all such as may have been or may be provided by or on behalf of the said Contractor.

Delay in Execution.—Work may be taken out of Contractor's hands.

14. In case the Contractor shall make default or delay in diligently continuing to execute or advance the works to the satisfaction of the Engineer, and such default of delay shall continue for six days after notice in writing shall have been given by the engineer to the contractor requiring him to put an end to such default or delay, or in case the contractor shall become insolvent, or make an assignment for the benefit of creditors, or neglect either personally or by a skilful and competent agent to superintend the works, then in any of such cases Her Majesty may take the work out of the contractor's hands and employ such means as she may see fit to complete the work, and in such cases the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and things whatsoever, and all horses, machinery and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

Contractor to take Risk of all Loss or Damage.

15. The contractor shall be at the risk of, and shall bear, all loss or damage whatsoever, from whatsoever cause arising, which may occur to the works, or any of them, until the same be fully and finally completed and delivered up to and accepted by the said Minister for the time being; and if any such damage or loss occur before

such final completion, delivery and acceptance, the contractor shall immediately at his own expense repair, restore and re-execute the work so damaged, so that the whole works, or the respective parts thereof, may be completed within the time hereby limited.

Contractor to have no Claim for Delay.

16. The contractor shall not have or make any claim or demand, or bring any action or suit or petition against Her Majesty for any damage which he may sustain by reason of any delay in the progress of the work, arising from the acts of any of Her Majesty's agents, and it is agreed that in the event of any such delay the contractor shall have such further time for the completion of the works as may be fixed in that behalf by the Minister for the time being.

Contractor not to make Assignment.—Work may be taken out of Contractor's Hands.

17. The contractor shall not make any assignment of this contract, or any sub-contract, for the execution of any of the works hereby contracted for; and in any event no such assignment or sub-contract, even though consented to, shall exonerate the contractor from liability, under this contract, for the due performance of all the work hereby contracted for. In the event of any such assignment or sub-contract being made, then the contractor shall not have or make any claim or demand upon Her Majesty for any future payments under this contract, for any further or greater sum or sums than the sum or sums respectively at which the work or works so assigned or sub-contracted for shall have been undertaken to be executed by the assignee or sub-contractor; and in the event of any such assignment or sub-contract being made without such consent, Her Majesty may take the work out of the contractor's hands, and employ such means as she may see fit to complete the same; and in such case the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and things whatsoever, and all horses, machinery, and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

18. Time shall be deemed to be of the essence of this contract.

Contractor Responsible for Damage.

19. The contractor shall be responsible for all damages claimable by any person or corporation whatsoever, in respect of any injury to persons or to lands, buildings, ships or other property, or in respect of any infringement of any right whatsoever, occasioned by the performance of the said works, or by any neglect or misfeasance or non-misfeasance on his part, and shall and will at his own expense, make such temporary provisions as may be necessary for the protection of persons, or of lands, buildings, ships or other property, or for the uninterrupted enjoyment of all rights of persons or corporations, in and during the performance of the said works.

Failing to Pay Salaries or Wages.

20. If the contractor fail at any time in paying the salaries or wages of any person employed by him upon or in respect of the said works, or any of them, and any part of such salary be one month in arrear, or if there be due to any such person one month's wages or salary, the engineer may notify the contractor to pay such salary or wages, and if two days elapse and the same be not paid in full up to the date of payment or to such other date as may be in accordance with the terms of employment of such person, then Her Majesty may pay to such person salary or

wages from any date to any date, and to any amount which may be payable, and may charge the same to the contractor, and the contractor covenants with Her Majesty to repay at once any and every sum so paid.

Stakes and Marks to be Protected.

21. The contractor will protect and will not remove or destroy, or permit to be removed or destroyed, the stakes, buoys and other marks placed on or about the said works by the engineers of the works, and shall furnish the necessary assistance to correct or replace any stake or mark which through any cause may have been removed or destroyed.

Contractor's Address.

22. Any notice or other communication mentioned in this contract to be notified or given to the contractor shall be deemed to be well and sufficiently notified or given, if the same be left at the contractor's office or mailed in any Post Office, to the contractor or foreman, addressed to the address mentioned in this contract, or to the contractor's last known place of business.

Schedule of Prices.

23. And Her Majesty, in consideration of the premises, hereby covenants with the contractor that he will be paid for and in respect of the works hereby contracted for, and in the manner set out in the next clause hereof, the several prices or sums following, viz.:—

SCHEDULE OF QUANTITIES AND PRICES.

*Approximate Quantities.		Description of Work.	Rates.	Amount.
			\$ cts.	\$ cts.
25	Acres	Clearing.....per acre	30 00	750 00
5	do	Close cutting,.....do	40 00	200 00
5	do	Grubbing.....do	50 00	250 00
10,000	L. feet	Fencing.....per l. ft.	06	600 00
100,000	C. yards	Solid rock excavation.....per c. yd.	1 75	175,000 00
50,000	do	Loose rock excavation.....do	75	37,500 00
3,000,000	do	Earth excavation (including that described in Clause 13 of Specification).....do	27	810,000 00
2,000	L. feet	Under-drains.....per l. ft.	20	400 00
Tunnelling (See clause 32 of Specification.)				
Say 250	do	"Line Tunnels." This tunnel will be formed in earth. The price per lineal foot of tunnel must cover excavation, centering, masonry and all expenses.....do	60 00	15,000 00
100	do	"Twelve feet—Stream Tunnels".....do	20 00	2,000 00
100	do	"Six feet—Stream Tunnels".....do	15 00	1,500 00
10,000	C. yards	Bridge masonry.....per c. yd.	10 50	105,000 00
5,000	do	Culvert masonry.....do	10 00	50,000 00
5,000	do	Dry masonry (retaining walls, etc.).....do	8 00	40,000 00
1,000	do	Paving.....do	5 00	5,000 00
1,000	do	Concrete.....do	5 50	5,500 00
1,500	do	Rip-rap.....do	2 75	41,250 00

SCHEDULE OF QUANTITIES AND PRICES—Continued.

*Approximate Quantities.		Description of Work.	Rates.	Amount.
			\$ cts.	\$ cts.
500	L. feet	Cast-iron pipes, 3ft. diameter inside, 1 in. thick, laid in concrete (the concrete not included in this item)..... per l. ft.	18 00	9,000 00
1,000	C. yards	Hand-laying rock embankments, where slopes are steeper than 1 to 1 (labor only)..... per c. yd.	2 75	2,750 00
2	No.	Timber bridge superstructure, 200 ft. clear..... per span.	8,000 00	16,000 00
1	do	do do 150 do do do	6,000 00	6,000 00
1	do	do do 125 do do do	5,000 00	5,000 00
1	do	do do 100 do do do	3,500 00	3,500 00
1	do	do do 60 do do do	2,100 00	2,100 00
		(See clauses 42 and 43 of Specification.)		
		Timber, best quality, for beam culverts, &c. :		
1,000	L. feet	12 ft. x 16 ft..... per l. ft.	0 50	500 00
50,000	do	12 ft. x 12 ft..... do	0 40	20,000 00
15,000	do	8 ft. x 16 ft..... do	0 30	4,500 00
50,000	do	8 ft. x 12 ft..... do	0 30	15,000 00
50,000	do	8 ft. x 10 ft..... do	0 25	12,500 00
		Other dimensions of timber (if required to be used) at proportionate prices.		
10,000	do	Piles driven (See clause 40 of Specification)..... per l. ft.	0 40	4,000 00
10,000	do	Round timber for crib wharfing, not less than 12 in. diameter..... do	0 25	2,500 00
10,000	do	Flatted timber in road diversion culverts, 12 in. thick..... do	0 30	3,000 00
200,000	F. B. M.	Plank..... per M.	35 00	7,000 00
50,000	Lbs.	Wrought iron..... per lb.	0 12	6,000 00
10,000	do	Cast iron..... do	0 10	1,000 00
100,000	No.	Ties..... Each.	0 25	25,000 00
4,000	Tons.	Carriage of rails and fastenings, from lower end of Section, including all handling..... Tons.	3 00	12,000 00
42	Miles.	Tracklaying..... Miles.	300 00	12,600 00
130,000	C. yards	Ballasting..... per c. yd.	0 27	35,100 00
25	No.	Setting points and crossings..... Each.	30 00	750 00
2	do	Public road level crossings, comprising timber cattle-guards, planking, small timber culvert under approaches, and notice-boards, complete..... Each.	200 00	400 00
		To cover work which possibly may be required under clauses 18, 43 and 91 of General Specification, short quantities, cofferdams, contingencies, etc., say \$250,000.....		250,000 00
		Total.....		1,746,150 00

*NOTE.—Some of the quantities printed in this column are estimated from preliminary location measurements, and may be considered roughly approximate. Other items are simply conjectured, and placed herein for the purpose of obtaining rates.

Payments.

24. Cash payments equal to about ninety per cent. of the value of the work done, approximately made up from returns of progress measurements and computed at the prices agreed upon or determined under the provisions of this contract, will

be made to the contractor monthly on the written certificate of the engineer that the work for or on account of which the certificate is granted, has been duly executed to his satisfaction, and stating the value of such work computed as above mentioned—and upon approval of such certificate by the Minister for the time being, and the said certificate and such approval thereof shall be a condition precedent to the right of the contractor to be paid the said ninety per cent. or any part thereof. The remaining ten per cent. shall be retained until the final completion of the whole work to the satisfaction of the chief engineer for the time being, having control over the work, and within two months after such completion the remaining ten per cent. will be paid. And it is hereby declared that the written certificate of the said engineer certifying to the final completion of the said works to his satisfaction shall be a condition precedent to the right of the contractor to receive or be paid the said remaining ten per cent., or any part thereof.

Monthly Estimates.

25. It is intended that every allowance to which the contractor is fairly entitled, will be embraced in the engineer's monthly certificates; but should the contractor at any time have claims of any description which he considers are not included in the progress certificates, it will be necessary for him to make and repeat such claims in writing to the engineer, within fourteen days after the date of each and every certificate in which he alleges such claims to have been omitted.

Claims by Contractor.

26. The contractor in presenting claims of the kind referred to in the last clause must accompany them with satisfactory evidence of their accuracy, and the reason why he thinks they should be allowed. Unless such claims are thus made during the progress of the work, within fourteen days, as in the preceding clause, and repeated, in writing, every month, until finally adjusted or rejected, it must be clearly understood that they shall be forever shut out, and the contractor shall have no claim on Her Majesty in respect thereof.

Progress Measurements.

27. The progress measurements and progress certificates shall not in any respect be taken as an acceptance of the work or release of the contractor from responsibility in respect thereof, but he shall at the conclusion of the work deliver over the same in good order, according to the true intent and meaning of this contract.

Operations may be suspended.—Resumed.

28. Her Majesty shall have the right to suspend operations from time to time at any particular point or points or upon the whole of the works, and in the event of such right being exercised so as to cause any delay to the contractor, then an extension of time equal to such delay or detention, to be fixed by the Minister as above provided for, shall be allowed him to complete the contract, but no such delay shall vitiate or avoid this contract or any part thereof, or the obligations hereby imposed or any concurrent or other bond or security for the performance of this contract, nor shall the contractor be entitled to any claim for damages by reason of any such suspension of operations. And at any time after operations have been suspended either in whole or in part, such operations may be again resumed and again suspended and resumed as Her Majesty may think proper. And upon the contractor receiving written notice on behalf of Her Majesty that the suspended operations are to be resumed, the contractor shall at once resume the operations and diligently carry on the same.

Appropriation by Parliament.

29. Should the amount now voted by Parliament and applicable towards payment for the work hereby contracted for, be at any time expended previous to the completion of the works, the Minister for the time being may give the contractor written notice to that effect. And upon receiving such notice the contractor may, if he thinks fit, stop the work—but in any case shall not be entitled to any payment for work done, beyond the amount voted and applicable as aforesaid—unless and until the necessary funds shall have been voted by Parliament in that behalf. And in no event shall the contractor have or make any claim upon Her Majesty for any damages or compensation by reason of the said suspension of payment, or by reason of any delay or loss caused by the stoppage of work.

Spirituous Liquors.

30. The contractor shall not permit, allow, or encourage the sale of any spirituous liquors on or near the works.

No Sunday labour.

31. No work whatever shall at any time or place be carried on during Sunday, and the contractor shall take all necessary steps for preventing any foreman, or agent, or men from working or employing others on that day.

Chief Engineer to be Arbitrator.

32. It is hereby agreed, that all matters of difference arising between the parties hereto, upon any matter connected with or arising out of this contract, the decision whereof is not hereby especially given to the engineer, shall be referred to the award and arbitration of the chief engineer for the time being, having control over the works, and the award of such Engineer shall be final and conclusive; and it is hereby declared that such award shall be a condition precedent to the right of the contractor to receive or be paid any sum or sums on account, or by reason of such matters in difference.

33. It is distinctly declared that no implied contract of any kind whatsoever, by or on behalf of Her Majesty, shall arise or be implied from anything in this contract contained, or from any position or situation of the parties at any time, it being clearly understood and agreed that the express contracts, covenants and agreements herein contained and made by Her Majesty, are and shall be the only contracts, covenants and agreements upon which any rights against Her Majesty are to be founded.

34. This contract is hereby, pursuant to the provisions of the 8th section of the Statute, 41st Victoria (1878), chapter 5, made subject to the express condition that no Member of the House of Commons of Canada shall be admitted to any share or part of such contract, or to any benefit to arise therefrom.

Contract may be Cancelled.

35. In the event of it becoming advisable, in the interests of the public, to suspend the work hereby contracted for, or any portion thereof, at any time before its completion, and to put an end to this contract, the Minister for the time being shall have full power to stop the work and to cancel this contract, on giving due notice to that effect to the contractor. The contractor, however, will be entitled to receive payment for all sums then due for work already done, materials used or delivered, or ready to be used, or in course of preparation, together with such reasonable compensation as will cover all *bona fide* damages, if any, resulting therefrom, and as may then be agreed upon; or, in case of disagreement, as may be determined by the Official Arbitrators of the Dominion of Canada; it being understood, however,

that no compensation will be allowed to or claimed by the contractor for materials procured for the works, after the date of the service of the notice above referred to, or for any loss of anticipated profits, either in respect of the works so suspended, as aforesaid, or of the materials then procured for said works.

IN WITNESS whereof, the contractor hath hereto set his hand and seal, and these presents have been signed and sealed by the said Minister, and countersigned by the Secretary of the Department of Railways and Canals, on behalf of Her Majesty.

Signed, sealed and delivered by }
the contractor, in presence of } (Signed) ANDREW ONDERDONK. [Seal.]
(Signed) A. P. BRADLEY.

Signed, sealed and delivered by } (Signed) CHARLES TUPPER,
the Minister, and countersigned } *Minister of Railways and Canals.*
by the Secretary, in presence of } (Signed) F. BRAUN,
(Signed) H. A. FISSIAULT. } *Secretary.* [Seal.]

SURETIES' INDENTURE.

THIS INDENTURE, made the fifteenth day of December, one thousand eight hundred and seventy-nine, between JOSEPH KAVANAGH, of the city of Ottawa, in the Province of Ontario, merchant, and DAVID OPPENHEIMER, of Yale, in the Province of British Columbia, merchant, hereinafter called "The Sureties," of the first part, and Her Majesty Queen Victoria, of the second part.

WITNESSETH that the sureties hereby for themselves, and each of them, their and each of their heirs, executors and administrators, jointly and severally, covenant with Her Majesty and Her successors, that the contractor named in the hereunto annexed Indenture, his executors and administrators, shall and will from time to time, and at all times, well and truly perform, keep and abide by all and singular the covenants, agreements and conditions in said Indenture contained, and on his part to be performed, kept and abided by. And the sureties, further, covenant and agree with Her Majesty and Her successors, that all the rights, privileges and powers which may, by virtue of the said Indenture, be exercised by or on behalf of Her Majesty, or by the Engineer or Engineers, or other persons mentioned in said Indenture, may be so exercised without notice to the said sureties, and without in any way releasing or interfering with the liability of the sureties under their covenants herein contained.

In witness whereof, the parties hereto have hereunto set their hands and seals.

Signed, sealed and delivered } (Signed) JOS. KAVANAGH, [Seal.]
in presence of }
(Signed) A. P. BRADLEY. } (Signed) DAVID OPPENHEIMER, [Seal.]

19 E.

(A.)

CANADIAN PACIFIC RAILWAY.

SPECIFICATION

OF

FISH-PLATE BOLTS AND SPIKES.

1. The Minister of Railways and Canals is prepared to receive tenders for the supply of 35 tons of fish-plate bolts and nuts, and 700 tons of railway spikes, in lots of not less than 100 tons.

2. Sealed tenders endorsed "Tenders for Bolts and Spikes," and addressed "F. Braun, Esq., Secretary, Department of Railways and Canals, Ottawa," will be received up to noon of Wednesday, the 20th day of August next.

3. The number of tons tendered for must be inserted in the tenders.

4. The bolts and nuts are to be made from the best refined iron. The bolts to be $3\frac{3}{4}$ inches long from under side of head, of three-fourths inch round iron, with square necks, and pressed cup-shaped heads. They will be screwed for a length of two inches, the thread being well cut on both bolts and nuts, and having a pitch of one-tenth of an inch. The nuts will be $1\frac{1}{2}$ inches square and seven-eighths inch thick. The whole to be dipped in linseed oil, and packed in strong iron-bound cases of two cwt. each.

5. The spikes are also to be made from the best refined iron five-eighths of an inch square, and must, on test, be equal to being bent to a double without fracture. They will have a pressed head of the usual size and form, the points chisel-sharpened, and be six inches in length over all. They will be put up securely in iron-bound cases of two cwt. each.

6. Samples of bolts and nuts and spikes may be seen at the office of the Engineer-in-Chief, Ottawa.

7. Inspectors may be appointed to overlook the manufacture and to test the quality; and the makers will be required to make such tests as the Inspectors may deem necessary.

8. The 35 tons of bolts and nuts and 400 tons of spikes will be delivered at Fort William, Lake Superior, and the other 300 tons of spikes will be delivered to the contractor for the "Colonization Line from Winnipeg," on the wharf at Montreal, or at some convenient point on the line of transit, west of that port. The bolts and nuts, with 100 tons of the spikes for Fort William, and the whole of the spikes for the Colonization Line, must be delivered by the 1st day of October next. The balance of the spikes for Fort William must be delivered before the close of navigation this year.

9. No tender will be entertained, unless on one of the printed forms prepared for the purpose, nor unless an accepted bank check for *two hundred dollars* accompanies the tender, which shall be forfeited if the party tendering declines or fails to enter into contract when called upon to do so, at the rates stated in the offer submitted. In the event of a tender not being accepted, the cheque will be returned.

10. For the due fulfilment of the contract, satisfactory security will be required, by deposit of money, public or municipal securities, or bank stock, to the amount of about five per cent. on the bulk sum of the contract.

11. The contractor shall provide sureties to the satisfaction of the Minister of Railways and Canals, and who, with himself, shall sign a contract, embodying this specification and other clauses usual in such agreements.

12. Payments will be made on certificate of delivery, equal to 80 per cent. of the delivered price, and the balance will be paid when the contract has been duly fulfilled.

13. The Government does not bind itself to accept the lowest, or any tender.

SANDFORD FLEMING,
Engineer-in-Chief.

CANADIAN PACIFIC RAILWAY OFFICE,
OTTAWA, 22nd July, 1879.

Signed by the Contractors and Sureties, in the presence of

(Signed) T. W. HARRINGTON,	}	(Signed) G. A. MILLER.
" L. A. LESAGE.		" CHARLES H. MILLER.
		" JAMES MITCHELL.
		" HECTOR LETOURNEUX.
		" DANIEL WILSON.

Signed by the Acting Minister of Railways and Canals, and by the Acting Secretary, in presence of

(Signed) H. A. FISSIAULT.	}	(Signed) J. H. POPE.
" E. BAUCE.		" F. H. ENNIS, Acting-Secretary.

ARTICLES OF AGREEMENT entered into on the fourth day of September, in the year of our Lord, one thousand eight hundred and seventy-nine, and made in triplicate between GEORGE ANGUS MILLER, CHARLES HERBERT MILLER, and JAMES MITCHELL, all three of the City of Montreal, in the Province of Quebec and Dominion of Canada, carrying on together the business of manufacturers under the name, style and firm of "MILLER BROS. & MITCHELL," and represented herein by GEORGE ANGUS MILLER, one of the members of the said firm, and hereinafter throughout called "the parties of the first part" of the first part; And HER MAJESTY QUEEN VICTORIA, represented herein by the Minister of Railways and Canals of the Dominion of Canada, of the second part; And Messrs. HECTOR LETOURNEUX, of the said City of Montreal, Clerk, and DANIEL WILSON, of the same place, Coal Merchant, Sureties of the third part;

WITNESS, that the parties of the first part hereby bind and oblige themselves to and in favor of Her said Majesty, Her Heirs and Successors, for and in consideration of the covenants, conditions and agreements hereinafter mentioned, to the satisfaction of the said Minister; to manufacture, supply and deliver for the use of the Canadian Pacific Railway, in accordance with the specification for the same hereunto annexed marked A:—1st. The quantity of four hundred tons (400 tons), the ton weight for the purposes hereof being fixed at two thousand two hundred and forty pounds, of railway spikes, delivered on the Railway Wharf at Fort William, Lake Superior; 2nd. And the quantity of three hundred (300) tons (the ton weight same as above,) of railway spikes, delivered on the wharf at the aforesaid City of Montreal. The whole to be delivered as follows: One hundred tons of spikes, for Fort William, on the Railway Wharf at Fort William; and the whole of the spikes for the "Colonization" Line from Winnipeg, say, three hundred tons on the wharf at Montreal, or near the same, as may be pointed out by the engineer or officer of the Department in charge of the works, and in such quantities as may be required, between the day of the date hereof and the first day of October, (1879), now next ensuing; and three hundred tons, being the balance of the 400 tons of spikes for Fort William, to be delivered on the Railway Wharf at Fort William, at such place or places as may be indicated by the said Departmental officer, and before the close of navigation this year (1879).

IN CONSIDERATION WHEREOF, Her Majesty Queen Victoria, represented by the said Minister as aforesaid, doth hereby promise and agree to pay the parties of the first part, or to the heirs, assigns, or lawful representatives of the parties of the first part (according to the provisions of the Act Thirty-first Victoria, Chapter Twelve,) that is to say:—The rate or sum of fifty-two dollars and seventy-five cents, currency, for each of the four hundred tons of railway spikes, delivered as aforesaid on the wharf at Fort William, (\$52.75); and the rate of forty-seven dollars and seventy-five cents per ton for each of the three hundred tons of railway spikes delivered as aforesaid on the wharf at Montreal, (\$47.75).

And the said parties of the first part, and Her said Majesty, represented as aforesaid, do hereby declare, covenant and agree that the said contract and undertaking shall be and is further made and entered into by the said parties of the first part and Her said Majesty, represented as aforesaid, under the express agreements, stipulations, covenants and conditions following, that is to say:—

Firstly.—That the payments of the price hereinbefore mentioned, shall be made to the parties of the first part within ten days after an estimate of the engineer or officer in charge shall have been received by the Minister, specifying the amount of spikes delivered, to the satisfaction of the said Minister, or his successors in office, or his engineer, or person in charge of the works, during the month then ended; but that nevertheless, it shall be lawful for Her Majesty to withhold from the parties of the first part and retain twenty per cent. out of the amount of the several estimates until the perfect completion of the contract, and the acceptance of the same by the Minister, which twenty per cent., so withheld and retained, shall be paid with the last instalment, within ten days after the engineer or officer in charge shall have

delivered to the Minister his final estimate of the materials furnished, in virtue of these presents, and his certificate of the contract having been fully completed and finished, if the Minister shall so soon have accepted and approved of the same; Provided always, and it is further agreed, that Her said Majesty, from time to time during the progress of the works, may pay to the parties of the first part the whole or any portion of the twenty per cent. so withheld and retained.

Secondly.—That if, by the report of the engineer or superintendent employed by the Minister in that behalf, it shall appear that the rate of progress in the delivery of the spikes is not such as to insure the completion of the same within the time herein prescribed, or if the parties of the first part shall persist in any course, violating the provisions of this contract, Her said Majesty shall have the power, at Her discretion, by the Minister aforesaid, or his successors in office, without previous notice or protest, and without process or suit at law, either to take the contract, or any part thereof, out of the hands of the parties of the first part, and to relet the same to any other contractor or contractors, without its being previously advertised; and the parties of the first part shall be liable for all damages, and extra costs and expenditure, which may be incurred by reason thereof; and shall likewise forfeit all moneys then due, under the conditions and stipulations, or any or either of them herein contained.

Thirdly.—That in case of failure in the contract, the parties of the first part shall thereby forfeit all right and claim to the said twenty per cent., or any part thereof remaining unpaid, as well as to any moneys whatever due on this contract.

Fourthly.—That all materials shall be inspected and approved of, before being accepted, either by the Minister or such person as he may appoint, and any materials disapproved of shall be removed, and if not removed by the parties of the first part, when directed by the Minister, or his engineer, or person in charge, then, the rejected materials shall be removed by the Minister, his engineer, or person in charge, to such place as he may deem proper, at the cost and charge, and at the risk of the parties of the first part; but it is distinctly understood and agreed, that the inspection and approval of materials shall not in anywise subject Her said Majesty to pay for the said materials or any portion thereof, nor prevent the rejection, afterwards, of any portion thereof, which may turn out unsound or unfit to be used in the work, nor shall such inspection be considered as any waiver of objection to the materials, on the account of their unsoundness or imperfection.

Fifthly.—Should any difference of opinion arise as to the construction to be put upon any part of the specifications, the same shall be determined by the Minister alone, and such determination shall be final and conclusive, and binding upon the parties to this contract, and every of them.

Sixthly.—That any notice or other paper connected with these presents, which may be required or desired, on behalf of Her Majesty, to be served on the parties of the first part, may be addressed to the parties of the first part, at his or their domicile or usual place of business, or at the place where the work is to be carried on, and left at the Post Office, and any paper so addressed and left at the Post Office shall, to all intents and purposes, be considered legally served.

Seventhly.—That should the parties of the first part not deliver the material herein contracted for, at the period agreed upon as above mentioned, the said parties of the first part shall be liable for, and shall cause to be paid to the party of the second part, all salaries or wages which shall become due to the person or persons superintending the work, on behalf of the said Minister from the above-named period for completion, until the same shall actually be completed and received.

Eighthly.—That none of the foregoing clauses or conditions shall be considered comminatory (*comminatoires*), but on the contrary shall be strictly observed and enforced; the said clauses and conditions being essential for the preservation of the interest of the public and expressing the exact intention of the parties thereto, and without the said clauses and conditions, and each of them, the present contract would not have been entered into.

Ninthly.—That should the amount now voted for this service by Parliament be at any time expended previous to the completion of this contract, the said parties of the first part, may or not, as may be seen fit, on receiving a notice in writing from the said party of the second part to the above effect, stop the delivery of materials; but, in any case, the parties of the first part shall not be entitled to any further payment for material, after the service of the notice above referred to, until the necessary funds shall have been voted by Parliament; nor shall the said parties of the first part have any claim for compensation or damages for the said suspension of payment.

Tenthly.—In this agreement the words "the parties of the first part" shall include and comprehend (where the context admits of it) the heirs, executors, and administrators of each of the parties of the first part.

And for the fulfilment of all and every the covenants and obligations, undertakings and clauses hereinbefore expressed, and every part thereof, the parties of the first part do hereby bind and oblige themselves to and in favor of Her said Majesty, Her Heirs and Successors, and the parties of the third part for themselves, their heirs and assigns do also hereby bind and oblige themselves jointly and severally the one for the other, and for and with the said parties of the first part, to and in favor of Her said Majesty, Her Heirs and Successors, for the due and faithful performance and fulfilment of all and every the covenants, obligations and undertakings hereinbefore expressed, so to be performed and fulfilled by the said parties of the first part, the parties of the third part making the same their own affair, as if they were themselves the contractors, and renouncing the benefit of the exceptions of division, discussion and fidejussion, and all other advantages allowed by law to sureties in ordinary cases.

IN WITNESS WHEREOF, the parties of the first part, and the said Minister representing Her Majesty as aforesaid, and also the parties of the third part, have hereunto signed their names and set their seals, and the Secretary hath also countersigned these presents. Twenty-two words obliterated are null, and one marginal note is good.

Signed and sealed by the said parties
of the first part and of the third part
in presence of
(Signed) T. W. HARRINGTON.
L. A. LESAGE.

(Signed) G. A. MILLER. [L.S.]
CHARLES H. MILLER. [L.S.]
JAMES MITCHELL. [L.S.]
H. LE TOURNEUX. [L.S.]
DANIEL WILSON. [L.S.]

Signed and sealed by the said Acting
Minister of Railways and Canals,
and countersigned by the Acting
Secretary, in presence of
(Signed) H. A. FISSIAULT.
E. BAUCE.

(Signed) J. H. POPE.
Acting Minister of Railways and Canals.
F. H. ENNIS,
Acting Secretary.

(No. 19 F.)

ARTICLES OF AGREEMENT entered into on the eighth day of September, in the year of our Lord one thousand eight hundred and seventy-nine, and made in duplicate: between "THE DOMINION BOLT COMPANY," carrying on the business of Bolt, Nut, and Spike Manufacturers, in the said City of Toronto and Province of Ontario, hereinafter throughout called the "parties of the first part," of the first part; And HER MAJESTY QUEEN VICTORIA, represented herein by the Minister of Railways and Canals, of the Dominion of Canada, of the second part;

WITNESS, that the parties of the first part hereby bind and oblige themselves to and in favor of Her said Majesty, Her Heirs and Successors, for and in consideration of the covenants, conditions and agreements hereinafter mentioned, to the satisfaction of the said Minister: To manufacture, supply, and deliver, for the use of the Canadian Pacific Railway, in accordance with the specification for the same hereunto annexed, marked "A," the quantity of thirty-five (35) tons (the ton weight for the purposes hereof being fixed at two thousand two hundred and forty pounds) of fish-plate bolts and nuts. The whole to be delivered at such place or places on the Railway Wharf at Fort William, Lake Superior, or near the same, as may be pointed out by the engineer or officer of the Department in charge of the works, and in such quantities as may be required, between the day of the date hereof and the first day of October, 1879, now next ensuing.

IN CONSIDERATION WHEREOF, Her Majesty Queen Victoria, represented by the said Minister as aforesaid, doth hereby promise and agree to pay the parties of the first part, or to the lawful representatives of the parties of the first part (according to the provisions of the Act thirty-first Victoria, chapter twelve), that is to say: The rate or sum of seventy-five dollars (\$75) per ton, of the weight aforesaid, of fish-plate bolts, and nuts delivered as aforesaid, agreeably to the true intent and meaning of the said annexed specification, and subject to the agreements following:—

And the said parties of the first part, and Her said Majesty, represented aforesaid, do hereby declare, covenant and agree that the said contract and undertaking shall be and is further made and entered into by the said parties of the first part and Her said Majesty, represented as aforesaid, under the express agreements, stipulations, covenants and conditions following, that is to say:—

Firstly.—That the payments of the price hereinbefore mentioned, shall be made to the parties of the first part within ten days after an estimate of the engineer or officer in charge shall have been received by the Minister, specifying the amount of fish-plate bolts and nuts delivered, to the satisfaction of the said Minister, or his successors in office, or his engineer, or person in charge of the works, during the month then ended; but that, nevertheless, it shall be lawful for Her Majesty to withhold from the parties of the first part and retain twenty per cent. out of the amount of the several estimates until the perfect completion of the contract, and the acceptance of the same by the Minister, which twenty per cent., so withheld and retained, shall be paid with the last instalment, within ten days after the engineer or officer in charge shall have delivered to the Minister his final estimate of the materials furnished, in virtue of these presents, and his certificate of the contract having been fully completed and finished, if the Minister shall so soon have accepted and approved of the same; Provided always, and it is further agreed, that Her said Majesty, from time to time during the progress of the works, may pay to the parties of the first part the whole or any portion of the twenty per cent. so withheld and retained.

Secondly.—That if by the report of the engineer or superintendent employed by the Minister in that behalf, it shall appear that the rate of progress in the delivery

of the material is not such as to insure the completion of the same within the time herein prescribed, or if the parties of the first part shall persist in any course, violating the provisions of this contract, Her said Majesty shall have the power, at Her discretion, by the Minister aforesaid, or his successors in office, without previous notice or protest, and without process or suit at law, either to take the contract, or any part thereof, out of the hands of the parties of the first part, and to relet the same to any other contractor or contractors, without its being previously advertised; and the parties of the first part shall be liable for all damages, and extra costs and expenditure, which may be incurred by reason thereof; and shall likewise forfeit all moneys then due, under the conditions and stipulations, or any or either of them herein contained.

Thirdly.—That in case of failure in the contract, the parties of the first part shall thereby forfeit all right and claim to the said twenty per cent, or any part thereof remaining unpaid, as well as to any moneys whatever due on this contract.

Fourthly.—That all materials shall be inspected and approved of, before being accepted, either by the Minister or such person as he may appoint, and any materials disapproved of shall be removed, and if not removed by the parties of the first part, when directed by the Minister or his engineer, or person in charge, then the rejected materials shall be removed by the Minister, his engineer, or person in charge, to such place as he may deem proper, at the cost and charge, and at the risk of the parties of the first part; but it is distinctly understood and agreed, that the inspection and approval of materials, shall not in anywise subject Her said Majesty to pay for the said materials or any portion thereof, nor prevent the rejection, afterwards, of any portion thereof, which may turn out unsound or unfit to be used in the work, nor shall such inspection be considered as any waiver of objection to the materials on the account of their unsoundness or imperfection.

Fifthly.—Should any difference of opinion arise as to the construction to be put upon any part of the specifications, the same shall be determined by the Minister alone, and such determination shall be final and conclusive, and binding upon the parties to this contract, and every of them.

Sixthly.—That any notice or other paper connected with these presents, which may be required or desired, on behalf of Her Majesty, to be served on the parties of the first part, may be addressed to the parties of the first part, at his or their domicile or usual place of business, or at the place where the work is to be carried on, and left at the Post Office, and any paper so addressed and left at the Post Office, shall, to all intents and purposes, be considered legally served.

Seventhly.—That should the parties of the first part not deliver the material herein contracted for, at the period agreed upon as above mentioned, the said parties of the first part shall be liable for, and shall cause to be paid to the party of the second part, all salaries or wages which shall become due to the person or persons superintending the work, on behalf of the said Minister from the above-named period for completion, until the same shall actually be completed and received.

Eighthly.—That should the amount now voted for this service by Parliament, be at any time expended previous to the completion of this contract, the said parties of the first part, may or not, as may be seen fit, on receiving a notice in writing from the said party of the second part to the above effect, stop the delivery of materials; but in any case, the parties of the first part, shall not be entitled to any further payment for material, after the service of the notice above referred to, until the necessary funds shall have been voted by Parliament; nor shall the said parties of the first part have any claim for compensation or damages for the said suspension of payment.

Ninthly.—In this agreement the words "the parties of the first part" shall include and comprehend (where the context admits of it) the successors of the parties of the first part.

IN WITNESS WHEREOF, the parties of the first part, and the said Minister representing Her Majesty as aforesaid, have hereunto signed their names and set

their seals, and the Secretary hath also countersigned these presents. Twenty-three words struck out are null.

Signed and sealed by the said parties of the first part, in presence of

(Signed) T. W. HARRINGTON.	}	(Signed) DOMINION BOLT CO., [L.S.]
L. A. LESAGE.		Per JOHN LIVINGSTONE, <i>Proprietor.</i>

Signed and Sealed by the said Minister of Railways and Canals, and countersigned by the Secretary, in presence of

(Signed) H. A. FISSIAULT.	}	(Signed) J. H. POPE,
E. BAUCE.		<i>Acting Minister of Railways and Canals.</i> F. H. ENNIS, <i>Acting Secretary</i>

(No. 19 a.)

COPIES OF CABLEGRAMS, *RE* LETTING 5,000 TONS STEEL RAILS AND FISH-PLATES.

OTTAWA, 17th June, 1879.

REYNOLDS, London.

When and what price could 5,000 tons Sandberg's Pacific Standard be delivered in Montreal.

FLEMING.

LONDON, 18th June, 1879.

SANDFORD FLEMING,
Ottawa

End of next month and August, five pounds sterling; if advise immediately, probably better.

REYNOLDS.

OTTAWA, 19th June, 1879.

REYNOLDS, London.

Receive tender, 5,000 tons, delivered Montreal before 15th August; cable number tenders and lowest; rails and fastenings must be Pacific Standard.

FLEMING.

LONDON, 21st June, 1879.

S. FLEMING, Ottawa.

Eleven lowest delivered; c.f.i. Montreal, 15th August; five for reply by cable, time short; shall I inspect?

REYNOLDS.

OTTAWA, 21st June, 1879.

REYNOLDS, London.

Order rails and fastenings; furnish Sandberg's template; oversee inspection.

FLEMING.

CANADIAN PACIFIC RAILWAY,
OFFICE OF THE ENGINEER-IN-CHIEF,
OTTAWA, 9th September, 1879.

F. H. ENNIS, Esq.,

Acting Secy., Department Railways and Canals.

SIR,—I beg to hand you herewith, for the information of the Department, the correspondence which took place in connection with the letting of the following contracts for the supply of 5,000 tons of steel rails, with the necessary fastenings delivered in Montreal, viz.:—

West Cumberland Co.....	2,000 tons steel rails, with necessary fish-plates.
Barrow Co.....	1,500 " "
Ebbw Vale Co	1,500 " "
Patent Bolt and Nut Co. say	48 tons bolts and nuts.

(Signed)

I am, etc.,

T. R. BURPEE,
Secretary.

STEPHENS & REYNOLDS,
Iron and Steel Merchants and Engineers,
3 CLEMENT'S LANE, LOMBARD ST., E.C.;
LONDON, 19th June, 1879.

GENTLEMEN,—Please quote us your lowest price, c.f.i. Montreal, for 5,000 tons of steel rails, 57½ lbs. per yard, with necessary steel fish-plates to enclose section, to be delivered at Montreal by the 15th of August next. Should you be unable to furnish the whole quantity by date specified, please quote for such portion as you can guarantee to deliver by the time named, and if unwilling to deliver in Montreal, kindly let us have your price for delivery f.o.b.; rails will be inspected during manufacture. Payment net cash, no commission being required.

Yours truly,

(Signed) STEPHENS & REYNOLDS.

The above sent to the following:—

Guest & Co.; Ebbw Vale Co.; Bolekow, Vaughan & Co.; Barrow & Co.; Chas. Cammell & Co.; West Cumberland Co.; John Brown & Co.; Moss Bay Co.; Rhefining Co.; Wilson, Cammell & Co.; Brown, Bayley & Dixon.

3 CLEMENT'S LANE, LOMBARD ST., E.C.,
LONDON, 2nd July, 1879,

DEAR SIR,—Please quote us your lowest price for 96,800 fish-bolts and nuts ¾ inches diameter, 3¾ inches long, cup head and square necks and nuts, oiled and packed in strong 2 cwt. iron-bound cans and delivered f.o.b. Newport. Terms of payment will be net cash on shipment, no commission being required; delivery to be made within three weeks of this date.

Yours truly,

(Signed) STEPHENS & REYNOLDS.

The above sent to the following:—

Patent Nut and Bolt Co.; Bayliss, Jones & Bayliss; Horton & Son.

WEST CUMBERLAND IRON AND STEEL CO., (LIMITED.)
WORKINGTON, 24th June, 1879.

MESSRS. STEPHENS & REYNOLDS,
3 Clement's Lane, Lombard Street, E.C.,
London.

DEAR SIRs—We have your favor of yesterday, for which we are very much obliged, and in reply wired you as follows:—"Have two pairs rolls to turn, will undertake to have three thousand delivered or shipped by fifteenth August, by Liverpool steamers, subject no break down machinery, please wire," and have your reply. Telegraph received, you say delivered or shipped, cannot accept shipment fifteenth August; you had better therefore state quantity you can guarantee to deliver Montreal by that date as per enquiry, telegraph reply immediately." In response to which we sent you the following message:—"Two thousand tons delivered by fifteenth August and another thousand on the way by that time, in your opinion if given to us at once," as we find we must turn new roll for your order, we should not like to undertake more than 2,000 tons delivered at Montreal by 15th August. It is, however, quite possible that we could exceed this quantity,

and we should be glad to have 3,000 tons viz: 2,000 tons to be delivered and 1,000 tons on the way, but if you cannot meet us in this we shall be quite content to enter 2,000 tons with the necessary fish-plates.

We await specification and templates without delay.

We remain, yours faithfully,

(Signed)

WILLIAM WILSON,
Secretary.

LONDON, 24th June, 1879.

GENTLEMEN,—This morning we received your telegram in reply to our letter of last night. We cannot accept anything later than 15th August next for delivery Montreal, in fact, could we give to the end of August we should have no difficulty in placing the whole five thousand tons with one maker. We therefore telegraphed and asked you to name a quantity you would guarantee to deliver by the time required, and this afternoon we have your reply, copies of both your telegrams and our own enclosed.

To save time we send you by post to night template of rails and fish-plates, and have now pleasure in giving you order for two thousand tons of the rails with the necessary steel fish-plates to be delivered at Montreal by the 15th August, at the price of four pounds nineteen shillings per ton, c.i.f. Montreal.

We do not quite understand the option you offer for the other 1,000 tons, but will write you as to this on receipt of your letter confirming your telegram to-morrow morning, and at the same time will send tracing and specifications; meantime we are,

Yours very truly,

(Signed)

STEPHENS & REYNOLDS.

Messrs the West Cumberland Iron and Steel Co., (Limited),
Londonderry, Workington.

Copy of Telegrams.

Received—Have two pairs rolls to turn; will undertake to have three thousand delivered or shipped by 15th August, by Liverpool steamers, subject no break down machinery; please wire.

Sent—Telegraph received; you say delivered or shipped, cannot accept shipment fifteenth August, you had better therefore state quantity you can guarantee to deliver Montreal by that date, as per enquiry; telegraph reply immediately."

Received—"Two thousand tons delivered by 15th August, and another thousand on the way by that time, in your option "if given to us at once."

BARROW HEMATITE STEEL CO'Y, (LIMITED),

BARROW-IN-FURNESS, 20th June, 1879.

MESSRS. STEPHENS & REYNOLDS,
London.

DEAR SIR,—We are much obliged by yours of yesterday. We have several negotiations for rails now pending and scarcely see how we can make room for 5,000 tons if they are carried through. If we knew to-morrow we could take the whole rails and fish-plates at £5 per ton all round delivered at Montreal nett cash, but as we are now placed we should quite as soon have the order for half only.

Yours faithfully,

(Signed)

W. H. SILVAR,
For the Company.

3 CLEMENT'S LANE, LOMBARD ST., E. C.,
LONDON, 25th June, 1879.

Messrs. The Barrow Haematite Iron and Steel Co. (Limited), Barrow.

GENTLEMEN,—As the time for delivery is so short, we have decided to divide the order for the 5,000 tons steel rails and fish-plates which you quoted us for on the 20th, and we this morning telegraphed you to which we have just received your answer; copies of both enclosed. We have much pleasure in giving you order for 1,500 of the rails, with the necessary steel fish-plates, to be delivered at Montreal by the 15th August, at the price of five pounds per ton c.i.f. Montreal.

We will, to-morrow, send you full particulars with tracing and specification. In the meantime,

We are, Gentlemen,
Yours truly,

(Signed) STEPHENS & REYNOLDS,
Per E. D. R.

Copy of Telegrams Sent.

"Propose sending you order for 1,500 tons rails with necessary fish-plates delivered Montreal, by 15th August. Price as per yours twentieth. Will this suit you. Please telegraph reply."

Received.—Obliged by telegram. Please send the order to-night if you can.

THE EBBW VALE STEEL, IRON & COAL CO. (LIMITED),
7 LAWRENCE POUNTNEY HILL,
LONDON, C. E., 19th June, 1879.

Messrs. STEPHENS and REYNOLDS.

DEAR SIRs,—In reply to your favor of this date, we will deliver 1,500 tons steel rails with necessary fish-plates at Montreal, by the 15th August next, at the price of \$5 per ton, c.i.f. Montreal.

We are, dear Sirs,
Yours truly,

(Signed) JOS. ROBINSON & Co.,
For the above Company.

LONDON, 26th June, 1879.

Messrs. the Ebbw Vale Steel, Iron and Coal Co. (Limited),
Ebbw Vale.

GENTLEMEN,—We have pleasure in giving you order for fifteen hundred tons of steel rails, 57½ lbs. to the yard, with necessary steel fish-plates, at the price of £5 (five pounds) per ton, delivered c.i.f. Montreal, by the 15th August next.

A tracing, showing, drilling, notching, also template, shall be sent you to-morrow. Meantime,

We are, Gentlemen,

Yours faithfully,

(Signed) STEPHENS & REYNOLDS.

THE PATENT NUT AND BOLT COMPANY (LIMITED),

24 BUDGE ROW, CANNON ST.,

LONDON, E. C., 4th July, 1879.

Messrs. STEPHENS and REYNOLDS.

GENTLEMEN,—We have very much pleasure in quoting you for the 96,000 bolts and nuts, say $\frac{3}{4}$ and $3\frac{3}{4}$ cup heads, square necks and square nuts, the price of £10 (ten pounds) per ton of f.o. b. ship at Newport, oiled and packed in strong iron bound cases, 2 cwt. each. Terms of payment, net cash delivery to be made within 3 weeks from date; the quality to be to your entire satisfaction and subject to approval, and reception at our works. Trusting to be favored with the order,

We are, Gentlemen,

Yours respectfully,

THE PATENT NUT AND BOLT CO. (LIMITED),

(Signed) ALFRED W. JONES.

Clements Lane, E. C.

LONDON, 4th July, 1879.

Messrs. The Patent Nut and Bolt Co. (Limited),
24 Budge Row, E. C.

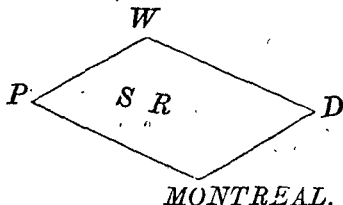
GENTLEMEN,—We have now pleasure in giving you order for 96,000 fish-bolts and nuts, in terms of your tender of this date, and we now beg to enclose your tracing.

Kindly let us have four samples bolts, to which you guarantee the bulk shall be equal, and let us know when ready for inspection and forwarding. The cases will be marked as at foot. Please take care that delivery is made in Newport not later than 25th of this month, and oblige,

Yours very truly,

(Signed) STEPHENS & REYNOLDS.

Mark for cases.



ARTICLES of Agreement entered into this twenty-ninth day of August, in the year of Our Lord one thousand and eight hundred and seventy-nine, and made in triplicate.

Between West Cumberland Iron and Steel Company, limited (hereinafter called the Company), of the first part; and Her Majesty the Queen Victoria, represented herein by the Honorable Sir Charles Tupper, the Minister of Railways and Canals of Canada (hereinafter called the Minister) of the second part.

WITNESS, that the company, for and in consideration of the conditions and agreements hereinafter mentioned, doth hereby agree with Her Majesty, Her successors and assigns, to manufacture, supply and deliver to the satisfaction of the Minister, in full and perfect accordance with the terms, and agreeably to the true interest and meaning of the specification hereunto annexed, marked "A" (which is hereby declared and agreed to be part and of parcel this agreement, and to be taken and read as incorporated herewith, and which is hereinafter called the specification), five thousand tons of steel rails of the standard of the Canadian Pacific Railway (hereinafter called the railway), together with such quantity and number of steel fish-plates as may be proportionate and required for laying the said rails on the track of the railway, and together, also, with such quantity and number of iron bolts and nuts as may be proportionate to and required for the rails on the track of the railway. The said delivery of the same respectively, to be made on such wharf in the harbor of the City of Montreal, in Canada, in bond, as the Minister may direct, as follows: Three thousand tons of the said steel rails, together with the quantity and number of steel fish-plates and of iron bolts and nuts, respectively, proportionate to and requisite for laying the said rails, on or before the first day of October, in the present year, one thousand eight hundred and seventy-nine, and the balance or remaining quantity of two thousand of the said steel rails, together with the proportionate quantity and number of steel fish-plates, and of iron bolts and nuts, respectively, proportionate and required for laying the said rails, on or before the first day of November, in this present year, one thousand eight hundred and seventy-nine, time being of the essence of this contract. In consideration whereof, Her Majesty, represented as aforesaid, doth hereby agree to pay to the company, or their lawful representative, the sum of four pounds nineteen shillings for each ton of the said rails and fish-plates, for the same quantity of five thousand tons of the said rails, and proportionate quantity of fish-plates respectively hereinbefore mentioned, and the sum of nine pounds fifteen shillings for each ton of the iron bolts and nuts proportionate and required for the rails, as hereinbefore mentioned. Such weight respectively of the rails, fish-plates, iron bolts and nuts being two thousand two hundred and forty pounds per ton, the whole being payable as follows, that is to say; eighty per cent., or thereabout, of the price of each shipment to be paid to the company on account of the same, through the Bank of Montreal, in the City of London, England, or the financial or other duly authorized agent of Canada in England, upon production of the bills of lading of such shipment, and of the policies or documents of insurance thereupon, and certificates of the inspection by the inspector appointed by the Minister for such purpose, and the balance or remaining sum of twenty per cent. of the full and entire contract price upon the certificate of the Engineer-in-Chief of the railway of the due fulfilment of this contract and agreement, and that the full quantity, quality, and weight of the rails, fish-plates and iron bolts and nuts, has been delivered in full accordance with the specification and with this agreement upon the appointed wharf in Montreal in good order and free from cost or expenses of shipping, insurance, freight, wharfage, harbor landing or other dues or expenses in connection with the same. Provided, and it is hereby agreed, that the acceptance at the City of Montreal of any number of tons weight of any shipment of the said rails, fish-plates, iron bolts and nuts, or of any of them, respectively, shall not be acceptance of the whole of the same or any shipment or delivery upon the wharf of Montreal, as expressed, but that the Minister may accept part and reject part of the same, respectively, where the

same shall not be found to be in accordance with this specification and agreement, and in any such case the amount of payment for the portion so accepted shall be in accordance with the terms of this proviso, and the part so rejected shall be left at the risk, cost and expense of the parties of the first part. And it is hereby further agreed upon that the Inspector to be appointed in England by the Minister for such purpose shall have full power to reject any of the rails, fish-plates, or iron bolts and nuts which, in his opinion, are not fully and in all respects conformable to and in accordance with the specification and this agreement, and further, that for securing the due performance of this agreement by the company the sum of one thousand two hundred and fifty pounds, either in bank deposit receipts, or securities to the cash value of the said sum, or other security approved by the Minister or the Financial or other duly authorized Agent of Canada in London, England, shall, within ten days hereafter, be deposited at the Bank of Montreal in London to the credit of the Financial Minister of Canada, the same to be disposed of by him for making good any defaults of the company in due fulfilment of this contract and agreement, but in no case shall Her Majesty or the Dominion of Canada, or any Minister, Officer or Agent, in their behalf be liable for any interest on this deposit, or for any loss or diminution in value of such securities. And it is further agreed that if, from strikes or other extraordinary occurrences beyond their control, the company shall be unable to complete the said deliveries or either of them within the times respectively specified, a further period not exceeding three months shall be allowed for such incomplete delivery, and thereafter only such further time as the Minister may by writing allow for such purpose.

IN WITNESS whereof the company hath hereunto caused its corporate seal to be set and affixed, and the President and Secretary of the company hath hereunto set their hands, and the Minister hath hereunto set his hand and affixed his seal, and the Secretary of the Department of Railways and Canals of Canada hath countersigned the same, on the day and year first above written.

The seal of the West Cumberland Iron and Steel Company, Limited, was hereunto set and affixed by

(Signed) WILLIAM WILSON,
Secretary of the of the said company,
and the same signed by

(Signed) ANDREW GREEN THOMPSON,
Director, for President and the said
WILLIAM WILSON, Secretary in the
said company in the Province of.

(Signed) Jos. HANNAH,
29th August, 1879.

Corporate [L.S.]

Signed, sealed and delivered by the Minister of Railways of Canada, in the presence of

(Signed) H. A. FISSIAULT. } (Signed) CHARLES TUPPER,
Minister of Railways and Canals.

Countersigned,

F. BRAUN,

[L.S.]

Secretary, Department of Railways and Canals,
Canada.

THE SPECIFICATION (A) REFERRED TO IN THE ANNEXED
ARTICLES OF AGREEMENT.

CANADIAN PACIFIC RAILWAY SPECIFICATION FOR STANDARD STEEL RAILS 57½ LBS.
AND FASTENINGS.

Rails.

1. The rails are to be accurately rolled, uniform throughout, true to template, and of that form known as the Canadian Pacific Railway Standard.

2. The steel used for rolling the rails must be of the first quality, such as to secure the best rails manufactured and best suited for the Canadian climate. The ends are to be cut straight and perpendicular to the axis of the rail. The head must be perfectly smooth, without any defects; the flanges are to be clean and without chipping. No attempt to improve defective places on the rails after rolling is to be allowed, either by hammering or reheating; likewise, no reheating shall be allowed for cutting the rails.

The straightening of the rails is to be made when cold by pressure.

Each rail is to be distinctly marked on the web with the initials C.P.R. steel, the name of the maker and the year of manufacture.

3. The weight of the rail must be as nearly as possible 57½ lbs., per yard, and every means must be taken to secure this weight. When rolling is commenced, and at other times during the process of manufacture, ten rails, perfectly true to section, will be weighed, and if found not corresponding with the required weight, such slight changes in section, as necessary to bring the weight to 57½ lbs., per yard, must be made. No rail varying more than one per cent. above or below the normal weight of 57½ lbs., per yard, will be accepted, and no payment for overweight will be made.

4. The general length of rail will be 30, 28, 26 and 24 feet; but a quantity not exceeding ten per cent. will be received in shorter lengths (22, 20, 19 and 18 feet, in about equal proportion), but none under 18 feet. The 19-foot length must be specially marked with red paint.

The short rails are not to be rolled purposely, but are to be cut out of such long rails as may have faulty ends.

The length of the rails are to be as stated above, and no deviation from the exact length to be allowed beyond three-sixteenths of an inch, either above or below; or a possible extreme variation of three-eighths of an inch between two rails; the one being all the allowance too long, and the other all the allowance too short.

5. The rails will be drilled (not punched or punched and enlarged) with two holes near each end. Those holes to be one inch by seven-eighths of an inch, as per drawing, the centres of the holes to be 2½ and 7½ inches respectively, from ends of rail. Two notches will be slotted in the flange at each end of the rail, with corners rounded, and the whole must be in the positions shewn on drawing.

Every possible care must be taken to render rail and fastening interchangeable.

6. The rails will be inspected during the whole course of manufacture by an engineer or inspector appointed by the Minister of Railways and Canals of Canada. Such officer shall have liberty to be present on the works at all hours, and will be empowered to reject all rails which, in his opinion, do not come up to the required standard, both of form and quality.

Besides accurate external examination, the rails will be subjected to the following tests at the contractor's expense:—

One rail out of each 100 tons (or one or more rails taken at random out of each day's make, if so required) will be chosen and tested as follows:—

A. A portion of the rails placed on supports four feet apart, must stand, without fracture, a blow from a ball one ton in weight falling from a height of 20 feet.

B. Another portion of the rail, similarly supported, shall be submitted to successive blows from a ball weighing 3 cwt., from heights of 3 feet, 4 feet and 5 feet, and the respective deflections are not to exceed $\frac{1}{8}$, $\frac{1}{4}$ and $\frac{1}{2}$ inch.

If the first rail taken out of the lot of the 100 tons does not stand the above test, the lot is to be divided by halves and one rail of each half (50 tons) tested. If these tests are unsuccessful the whole lot is to be rejected.

The falling weight test shall be continued until fracture results and the facts duly recorded and reported.

All the expenses of testing is to be borne by the makers. The test to be recorded in a statement signed by the receiving Inspector and by the manufacturer's agent present at the tests. All rejected rails must be painted in white paint on the two ends and over the letters C.P.R. on the web on the both sides. The accepted rails are to be weighed and each stamped at the ends with the initials of the Inspector.

STEEL FISH-PLATES.

1. The fish-plates are to be of a section to fit the Canadian Pacific standard rail and of a similar quality of tough, mild steel as the rails, and subject to such tests as may be required.

2. A template will be furnished to which two sample plates shall be made and, when approved by the engineer, they shall be the standard of finish and weight.

3. They are to be twenty inches long, square at ends, perfectly straight and smooth on every surface, and of uniform section throughout.

4. Each fish-plate must be punched hot with four holes, as shown on drawing; these holes must be clean and true, square through the plate, and exactly in the centre of the width, free from burrs on either side, and perfectly accurate in size and position.

5. Every means must be taken to make the fish-plates uniformly true to template, and exactly according to drawing, so as to fit the rails perfectly and interchangeably.

6. The fish-plates to be dipped to prevent rusting, and then properly secured in bundles of ten in the usual manner for shipment.

BOLTS AND NUTS.

1. The bolts $\frac{1}{2}$ inch in diameter, $3\frac{1}{2}$ inch long, to be made with cup heads and square necks, in accordance with the drawing, the nuts are to be square.

2. The iron is to be of a tough, fibrous quality, equal to best Staffordshire, and shall be subject to the approval of the inspecting engineer.

3. The workmanship and finish must be of the best description, great care being taken that the internal faces of the head and nut are exactly square with the axis of the bolt.

4. The bolt heads and necks must be solid. The threads of screws to be Whitworth's standard, ten to the inch, clearly cut, to fit lightly into the nuts and made so as to hold throughout their entire length.

5. Samples to be submitted to and approved by the inspecting engineer before the work is commenced, and the whole must be subject to close inspections at all times.

6. The bolts and nuts are to be heated and dipped to prevent rusting, and packed in strong iron-bound cases, each case to contain not over 2 cwt.

(Signed) SANDFORD FLEMING,
Engineer-in-Chief.

OTTAWA, July 15th, 1879.

West Cumberland Iron and Steel Company, (Limited.)

(Signed) WM. WILSON,
Secretary.

Aug. 29th, 1879.

19H.

A.

CANADIAN PACIFIC RAILWAY.

SPECIFICATION.

OF COMBINED PASSENGER AND FREIGHT BUILDING.

1. The materials required for the framing and finishing of the walls, partitions, roof, &c., to be of the best quality of their several kinds. The timber for the carpenter work may be spruce, that for the joiner work and sheathing to be of white pine. The timber to be cut die square, perfectly sound, free from shakes, large knots, and all other defects.

2. The general dimensions, height of rooms and internal arrangements are shown on the drawings. The chambers of the second story will not be finished inside.

3. The buildings and platforms will be erected on cedar or tamarac mud sills, firmly bedded. The ground over the several sites will be excavated and levelled where necessary for this purpose.

4. The frame work consists of a sill and wall plate 6in. x 4in. half checked at joinings and corners and spiked. Upright posts 6in. x 6in. to be set at each corner of building, on each side of door and window openings and under brackets. Intermediate posts 6 in. x 4 in. to be placed at distances not exceeding 4ft. The girts 6in. x 2in., to be placed about 2ft. 6in. apart, gained into posts and properly nailed. Outer walls to have studding necessary for lathing purposes. All to be properly trimmed for doors and windows.

5. The outer walls of the building to be covered with 1in. rough square edged merchantable pine timber, in widths of 9 inches, of sufficient length to reach from the lower side of sill to under side of roof boarding, and nailed properly with 3in. cut nails.

6. After the boards are nailed on, the joints are to be covered with best 3in x 1in. battens of pine, cut in one length same as boards, and nailed with 2½in cut nails.

7. The roof to be constructed as shown, the rafters to be of 9 x 2 placed at 2ft. 6in. centres and connected by a collar beam 9 x 2. The rafters to project 7ft. over the walls of the building.

8. The projecting portions of roof to be supported by good strong pine brackets, made from 6in. x 6in. scantling, having moulded ends, and to be strongly bolted to posts of building.

9. The rafters to be covered with 1in. pine or spruce, matched boards, not more than 9 inches wide, the joints broken where practicable, and properly nailed with 3in. cut nails, three nails to each board on each bearing.

10. The roofboards to be covered with the best pine or cedar shingles laid in mortar, and not more than four inches to the weather, well nailed to boards about six inches above the butt.

11. The roof to be finished with saddleboards 6 inches broad, and a ridge roll 2½ inches in diameter.

12. The underside of projections of roof shall be covered with 1-in. well seasoned pine boards, planed, grooved and tongued, and not more than 4in. wide. The ends of the rafters and roof boarding to be finished off with box cornice and a fascia boarding, to detail, as shown on drawing.

13. The floor joists to be 12 in. x 3 in. planks, 18 in. from centres, bridged with two rows of 1 in. x 3 in. crossed bridging. The joists in office and waiting rooms to

be covered with a double floor. First with 1 in. boards nailed with 3 in. cut spikes, then with $1\frac{1}{2}$ in. planed, grooved and tongued flooring nailed to floor below with 4 in. cut spikes. The joists in office and waiting-room to be counter-floored. Fillets 1 in. x $1\frac{1}{2}$ in. well nailed, covered with rough boarding, and to have a good coat of hair mortar.

14. The partition wall between freight room and office to be of 2 in. x 6 in. studding. The other partitions will be set throughout as shown by the plans, studs 2 in. x 4 in. set 16 in. from centres. Studs for door-jams and projecting angles to be 4 in. x 4 in. or set double.

15. Fix grounds around the window and door openings, and for top of base and skirting to finish flush with the plastering, and finish all angles with corner bead.

16. The windows to have double frames, pulley stiles $1\frac{1}{2}$ in. thick, sashes 2 in. thick, throated and moulded, single hung, furnished with pulleys, cords and weights, and with all necessary fastenings; to have outside and inside linings, and wickets placed where shown on plan. The glass for windows and ransoms to be of 21 oz. Chance's Smethwick.

17. The outside doors of waiting rooms to be as shown on drawing, framed of 2-inch pine plank with panels and mouldings, provided with strong hinges, latches and approved locks. The inside doors to be $1\frac{1}{2}$ inches thick, framed with panels and mouldings, and provided with all necessary hinges and locks. The freight-room doors to be made from 2-inch seasoned pine, and fitted in with two thicknesses of grooved and tongued stuff placed diagonally and well fastened. To slide on rollers from centre to each side in a frame built inside, and to be provided with rollers, fastenings and locks.

18. The walls of the waiting rooms, office, baggage room and closets to be sheathed to the height of four feet with pine sheathing, planed, matched and beaded, put on vertical, and finished with a neat cap. The walls under the sheathing to receive a coat of plaster.

19. The ceilings, walls and partitions of the office, waiting rooms, baggage room and closets to be lathed, breaking joint, with good sound laths, and the whole to be covered with three coats of plaster, the first coat to have sufficient hair mixed with it to ensure perfect adhesion. The mortar to be composed of fresh burned lime and clean coarse sand to approval.

20. The inside of the freight room to be lined with 1-inch pine boards 9 inches wide, from the floor upwards to a height of 8 feet 6 inches. The whole to be well nailed with 3-inch cut nails to posts and girts. The floor to be of good sound 3-inch plank, well nailed to joists with 6-inch cut spikes.

21. A "Moulds" earth closet of approved pattern to be furnished and put in where shown or directed; to have seat fitted up in the usual manner, the seat to have a cover secured at the back with two butt hinges.

22. A strong platform will be framed, from 3-inch plank, as may be directed, to carry chimney, which will be built of best quality of brick, finished at top as shown on drawings.

23. The whole of the internal and external woodwork, except the shingles, to be properly primed, knotted and stopped, and will be painted with three coats of best anti-corrosive paint and linseed oil, of an approved light stone color. The shingles to be painted two coats anti-corrosive paint and linseed oil and finished of an approved slate color.

24. The platforms to be of the dimensions shown on the plan, supported on flatted cedar or tamarac sills and joists as shown, the whole to be planked crosswise with good sound 3-inch plank, the edge next the track to be level with the surface of the rail, and the platform to incline upwards four inches, to the level of the floor of waiting room. In front of freight room a freight platform 8 ft. wide and 3 ft. 9 in. above top of rail to be built as shown.

25. This specification, together with the plan exhibited, are to be taken as giving a general idea of the work required, and any omissions in either are not to be considered as invalidating the contract, and parties tendering must embrace every-

thing in their tender, whether mentioned or not, as they will be required to complete the work according to the true intent and meaning of this specification and plan for the contract rate.

26. The contractor shall, at his own expense, from time to time, insure against loss by fire, and make the policies over to the Minister of Railways and Canals, for the amount of moneys advanced on the work.

27. The contractor, finding all material and labour, shall complete the buildings for the contract price. He shall commence operations immediately after the contract has been executed, and make such progress as shall secure their completion, ready for occupation, by the time mentioned in the form of tender.

28. No tender will be entertained, unless on one of the printed forms prepared for the purpose, nor unless an accepted bank cheque for *two hundred dollars* accompanies the tender, which shall be forfeited if the party tendering declines or fails to enter into contract for the works, when called upon to do so, at the sum stated in the offer submitted. In the event of a tender not being accepted, the cheque will be returned.

29. For the due fulfilment of this contract, satisfactory security will be required, by the deposit of money, public or municipal securities, or bank stock, to the amount of about five per cent. on the bulk sum of the contract, of which the sum sent in with the tender will be considered a part.

30. The contractor shall provide sureties to the satisfaction of the Minister of Railways and Canals, and who, with himself, shall sign a contract, embodying this specification and other clauses usual in such agreements.

31. Payments will be made as the work progresses, on certificate of the engineer, with 10 per cent. deduction, until the contract has been duly fulfilled.

32. The Government does not bind itself to accept the lowest, or any tender.

SANDFORD FLEMING,

Engineer-in-Chief.

CANADIAN PACIFIC RAILWAY OFFICE,
OTTAWA, 15th June, 1879.

THIS INDENTURE made the fifteenth day of August, one thousand eight hundred and seventy-nine, between RICHARD DICKSON, of Selkirk, in the Province of Manitoba, House-builder and Carpenter, hereafter called "the Contractor" of the first part, and Her Majesty Queen Victoria represented herein by the Minister of Railways and Canals, of the second part, WITNESSETH, that in consideration of the covenants and agreements on the part of Her Majesty hereinafter contained, the contractor covenants and agrees with Her Majesty as follows:

Work.—Engineer.

1. In this contract the word "work" or "works" shall, unless the context require a different meaning, mean the whole of the work and the materials, matters and things required to be done, furnished and performed by the contractor under this contract. The word "engineer," shall mean the chief engineer for the time being having control over the work, and shall extend to and include any of his assistants acting under his instructions, and all instructions or directions, or certificates given or decisions made by any one acting for the chief engineer, shall be subject to his approval, and may be cancelled, altered, modified and changed, as to him may see fit.

On whom Binding.

2. All covenants and agreements herein contained shall be binding on and extend to the executors and administrators of the contractor, and shall extend to and be binding upon the successors of Her Majesty, and wherever in this contract Her Majesty is referred to, such reference shall include her successors, and wherever the contractor is referred to, such reference shall include his executors and administrators.

Labor, Plant and Material.—Time for Completion.—Materials and Workmanship.

3. That the contractor will, at his own expense, provide all and every kind of labor, machinery and other plant, materials, articles, and things whatsoever necessary for the due execution and completion of all and every the works set out or referred to in the specifications, hereunto annexed and marked A, and set out or referred to in the plans and drawings prepared and to be prepared for the purposes of the work, and will execute and fully complete the respective portions of such works, and deliver the same complete to Her Majesty, on or before the first day of November, A.D. eighteen hundred and seventy-nine, now next ensuing. The said work to be constructed of the best materials of their several kinds, and finished in the best and most workmanlike manner, in the manner required by and in strict conformity with the said specifications and drawings which may from time to time be furnished (which said specifications are hereby declared to be part of this contract), and to the complete satisfaction of the chief engineer for the time being having control over the work.

Omissions to be Made Good.

4. The aforesaid specification and the several parts of this contract shall be taken together, to explain each other, and to make the whole consistent; and if it be found that anything has been omitted or mis-stated, which is necessary for the proper performance and completion of any part of the work contemplated, the contractor will, at his own expense, execute the same as if it had been properly described, and the decision of the engineer shall be final as to any such error or omission, and the correction of any such error or omission, shall not be deemed to be an addition to or deviation from the works hereby contracted for.

Engineer may Order Extra Work and Make Changes.

5. The chief engineer, with the sanction of the Minister of Railways and Canals, shall be at liberty at any time, either before the commencement or during the construction of the works or any portion thereof, to order any work to be done, and to make any changes which he may deem expedient in the character, nature, location, or position of the works, or any part or parts thereof, or in any other thing connected with the works, whether or not such changes diminish the work to be done, or the cost of doing the same, and the contractor shall immediately comply with all written requisitions of the engineer in that behalf, but the contractor shall not make any change in, or addition to, or omission, or deviation from the works, unless directed by the engineer, and shall not be entitled to any payment for any change, addition, or deviation, unless such change, addition, omission, or deviation shall have been first directed in writing by the engineer, and notified to the contractor in writing, nor unless the price to be paid for any additional work shall have been previously fixed by the Minister in writing, and the decision of the engineer as to whether any such change or deviation increases or diminishes the cost of the work, and as to the amount to be paid or deducted, as the case may be, in respect thereof, shall be final, and the obtaining of his certificate shall be a condition precedent to the right of the contractor to be paid therefor. If any such change or alteration constitutes, in the opinion of the said engineer, a deduction from the works, his decision as to the amount to be deducted on account thereof shall be final and binding.

Changes shall not Invalidate Contract.

6. That all the clauses of this contract shall apply to any changes, additions, or deviations, in like manner, and to the same extent, as to the works at present projected, and no changes, additions, deviations or variations shall annul or invalidate this contract.

Limit of Expenditure under this Contract.

7. It being the intention that the cost of the work to be done under this contract be limited to the sum of Fifteen Thousand Eight Hundred and Two Dollars and Forty Cents, which sum is to be taken as the maximum amount of this contract, not to be exceeded; it is hereby specially agreed that should it, at any time during the execution of the said work, appear from the cost of the work then performed, as compared with the value of the works still to be done, that such maximum amount will be exceeded, whether by reason of additions, alterations, variations, for any other cause whatsoever, the contractor will then be required to complete only such portion of the works herein contemplated as will be indicated by the engineer, with the view to limit the total expenditure under this contract to the maximum above stated; and so soon as the said maximum amount will be expended, this contract will then be considered as ended, and the contractors will not thereafter be entitled to continue the works under this contract, or to receive any further payment beyond the said maximum amount, unless the Minister should authorize and direct further expenditure; in which case, it is understood that the Minister will have the right (which is hereby expressly reserved) to direct that any works, which may then remain to be done, shall be executed under this contract; and the contractor hereby agrees to execute the same at the rates or prices hereinafter mentioned, as if these remaining works formed part of this contract. Provided also, that in case the said works, on completion, by reason of alterations, variations, deviations, diminutions, omissions, or otherwise, should not amount to the total sum above mentioned, the contractor will not be entitled to the payment of the difference in cost, whatsoever the same may be. No compensation shall, in any case, be claimable by the contractor for any loss of anticipated profits.

Engineer to be Sole Judge of Work, Material, &c.

8. That the engineer shall be the sole judge of work and material in respect of both quantity and quality, and his decision on all questions in dispute with regard to work or material, or as to the meaning or intention of this contract, and the plans, specifications and drawings shall be final, and no works or extra or additional works or changes shall be deemed to have been executed, nor shall the contractor be entitled to payment for the same, unless the same shall have been executed to the satisfaction of the engineer, as evidenced by his certificate in writing, which certificate shall be a condition precedent to the right of the contractor to be paid therefor.

Schedule of Prices.

9. It is hereby distinctly understood and agreed, that the respective portions of the works set out or referred to in the list or schedule of prices to be paid for the different kinds of work, include not merely the particular kind of work or materials mentioned in said list or schedule, but also all and every kind of work, labor, tools and plant, materials, articles and things whatsoever necessary for the full execution and completing ready for use of the respective portions of the works to the satisfaction of the engineer. And in case of dispute as to what work, labor, materials, tools and plant are or are not so included, the decision of the engineer shall be final and conclusive.

Foreman.

10. A competent foreman is to be kept on the ground by the contractor during all the working hours, to receive the orders of the engineer, and should the person so appointed be deemed by the engineer incompetent, or conduct himself improperly, he may be discharged by the engineer, and another shall at once be appointed in his stead; such foreman shall be considered as the lawful representative of the contractor, and shall have full power to carry out all requisitions and instructions of the said engineer.

Unsuitable Material or Imperfect Work.

11. In case any material, or other things, in the opinion of the engineer not in accordance with the said several parts of this contract, or not sufficiently sound or otherwise unsuitable for the respective works, be used for or brought to the intended works, or any part thereof, or in case any work be improperly executed, the engineer may require the contractor to remove the same, and to provide proper material or other things, or properly re-execute the work, as the case may be, and thereupon the contractor shall and will immediately comply with the said requisition, and if twenty-four hours shall elapse and such requisition shall not have been complied with, the engineer may cause such material, or other things, or such work, to be removed; and in any such case the contractor shall pay to Her Majesty all such damages and expense as shall be incurred in the removal of such material, materials or other things, or of such work; or Her Majesty may, in Her discretion, retain and deduct such damages and expenses from any amounts payable to the contractor.

All Plant and Material to Become Property of Her Majesty.

12. All machinery and other plant, materials and things whatsoever, provided by the contractor for the works hereby contracted for, and not rejected under the provisions of the last preceding clause, shall from the time of their being so provided become, and until the final completion of the said works, shall be the property of Her Majesty for the purposes of the said works, and the same shall on no account be taken away, or used or disposed of except for the purposes of the said works, without the

consent in writing of the engineer, and Her Majesty shall not be answerable for any loss or damage whatsoever which may happen to such machinery or other plant, material or things, provided always that upon the completion of the works and upon payment by the contractor of all such moneys, if any, as shall be due from him to Her Majesty such of the said machinery and other plant, material and things as shall not have been used and converted in the works, and shall remain undisposed of shall, upon demand, be delivered up to the contractor.

Insufficient Machinery.—Material or Labour to be Increased.

13. If the engineer shall at any time consider the number of workmen, horses or quantity of machinery or other plant, or the quantity of proper materials, respectively employed or provided by the contractor on or for the said works, to be insufficient for the advancement thereof towards completion within the limited times, or that the works are, or some part thereof is not being carried on with due diligence, then in every such case the said engineer may, by written notice to the contractor, require him to employ or provide such additional workmen, horses, machinery or other plant or materials as the engineer may think necessary, and in case the contractor shall not thereupon, within three days, or such other longer period as may be fixed by any such notice, in all respects comply therewith, then the engineer may, either on behalf of Her Majesty, or if he see fit, may, as the agent of and on account of the contractor, but in either case at the expense of the contractor, provide and employ such additional workmen, horses, machinery and other plant, or any thereof or such additional and materials respectively, as he may think proper, and may pay such additional workmen such wages, and for such additional horses, machinery or other plant and materials respectively, such prices as he may think proper, and all such wages and prices respectively shall thereupon at once be repaid by the contractor, or the same may be retained and deducted out of any moneys at any time payable to the contractor; and Her Majesty may use, in the execution or advancement of the said work, not only the horses, machinery and other plant and materials so in any case provided by anyone on Her behalf, but also all such as may have been or may be provided by or on behalf of the said contractor.

Delay in Execution.—Work may be taken out of Contractor's Hands.

14. In case the contractor shall make default or delay in diligently continuing to execute or advance the works to the satisfaction of the engineer, and such default or delay shall continue for six days after notice in writing shall have been given by the engineer to the contractor requiring him to put an end to such default or delay, or in case the contractor shall become insolvent, or make an assignment for the benefit of creditors, or neglect, either personally or by a skilful and competent agent, to superintend the works, then in any of such cases Her Majesty may take the work out of the contractor's hands and employ such means as She may see fit to complete the work, and in such cases the contractor shall have no claim for any further payments in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and things whatsoever, and all horses, machinery and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions of the said conditions contained in the twelfth clause hereof.

Contractor to take Risk of all Loss or Damage.

15. The contractor shall be at the risk of and shall bear all loss or damage whatsoever, from whatsoever cause arising, which may occur to the works, or any of them, until the same be fully and finally completed and delivered up to and ac-

cepted by the said Minister for the time being; and if any such loss or damage occur before such final completion, delivery and acceptance, the contractor shall immediately, at his own expense, repair, restore and re-execute the work so damaged, so that the whole works, or the respective parts thereof, may be completed within the time hereby limited.

Contractor to have no Claim for Delay.

16. The contractor shall not have or make any claim or demand, or bring any action or suit or petition against Her Majesty for any damage which he may sustain by reason of any delay in the progress of the work, arising from the acts of any of Her Majesty's agents, and it is agreed that in the event of any such delay the contractor shall have such further time for the completion of the works as may be fixed in that behalf by the Minister for the time being.

Contractor not to make Assignment.—Work may be taken out of Contractor's Hands.

17. The contractor shall not make any assignment of this contract, or any sub-contract, for the execution of any of the works hereby contracted for and in any event no such assignment or sub-contract, even though consented to, shall exonerate the contractor from liability, under this contract, for the due performance of all the work hereby contracted for. In the event of any such assignment or sub-contract being made, then the contractor shall not have or make any claim or demand upon Her Majesty for any future payments under this contract for any further or greater sum or sums than the sum or sums respectively at which the work or works so assigned or sub-contracted for shall have been undertaken to be executed by the assignee or sub-contractor; and in the event of any such assignment or sub-contract being made without such consent, Her Majesty may take the work out of the contractor's hands, and employ such means as she may see fit to complete the same; and in such case the contractor shall have no claim for any further payment in respect of the works performed, but shall nevertheless remain liable for all loss and damage which may be suffered by Her Majesty by reason of the non-completion by the contractor of the works; and all materials and things whatsoever, and all horses, machinery and other plant provided by him for the purposes of the works, shall remain and be considered as the property of Her Majesty for the purposes and according to the provisions and conditions contained in the twelfth clause hereof.

18. Time shall be deemed to be of the essence of this contract.

Contractor Responsible for Damage.

19. The contractor shall be responsible for all damages claimable by any person or corporation whatsoever, in respect of any injury to persons or to lands, buildings, ships or other property, or in respect of any infringement of any right whatsoever, occasioned by the performance of the said works, or by any neglect or misfeasance or non-misfeasance on his part; and shall and will at his own expense, make such temporary provisions as may be necessary for the protection of persons, or of lands, buildings, ships or other property, or for the uninterrupted enjoyment of all rights of persons or corporations, in and during the performance of the said works.

Failing to pay Salaries or Wages.

20. If the contractor fail at any time in paying the salaries or wages of any person employed by him upon or in respect of the said works, or any of them, and any part of such salary be one month in arrear, or if there be due to any such person one month's wages or salary, the engineer may notify the contractor to pay such salary or wages, and if two days elapse and the same be not paid in full up to the date of payment or to such other date as may be in accordance with the terms of

employment of such person, then Her Majesty may pay to such person salary or wages from any date to any date, and to any amount which may be payable, and may charge the same to the contractor, and the contractor covenants with Her Majesty to repay at once any and every sum so paid.

Stakes and Marks to be Protected..

21. The contractor will protect and will not remove or destroy or permit to be removed or destroyed, the stakes, buoys and other marks placed on or about the said works by the engineers of the works, and shall furnish the necessary assistance to correct or replace any stake or mark which through any cause may have been removed or destroyed.

Contractor's Address.

22. Any notice or other communication mentioned in this contract to be notified or given to the contractor shall be deemed to be well and sufficiently notified or given, if the same be left at the contractor's office or mailed in any post office, to the contractor or foreman, addressed to the address mentioned in this contract, or to the contractor's last known place of business.

Schedule of Prices.

23. And Her Majesty, in consideration of the premises, hereby covenants with the contractor, that he will be paid for and in respect of the works hereby contracted for, and in the manner set out in the next clause hereof the several prices or sums following, viz:

Miles.	Name of Station.	Description and Dimensions.	Price for each complete.
			\$ cts.
.....	Emerson.....	Station building, 120 ft. by 24 ft.; platform, 300 ft. by 12 ft., along front, and with end rear portions.....	3,340 40
10	Penza.....	Station building, 60 by 24; platform, 300 ft. by 12 ft., along front, and with end and rear portions.....	2,030 40
18	Arnaud.....	Platform only, 100 ft. by 12 ft., including raised portion.....	200 00
26	Dufrost.....	Platform only, 100 ft. by 12 ft., including raised portion.....	200 00
35	Otterburn.....	Station building, 60 by 24; platform, 300 ft. by 12 ft., along front, and with end and rear portions.....	2,030 40
43	Niverville.....	Station building, 60 by 24; platform, 300 ft. by 12 ft., along front, and with end and rear portions.....	2,030 40
54	St. Norbert.....	Platform only, 100 ft. by 12 ft., including raised portion.....	200 00
62	St. Boniface.....	Station building, 120 ft. by 24 ft., platform, 300 ft. by 12 ft., along front, and with end and rear portions.....	3,340 40
70	Platform only, 100 ft. by 12 ft., including raised portion.....	200 00
77	Gonor.....	Platform only, 100 ft. by 12 ft., including raised portion.....	200 00
85	Selkirk.....	Station building, 60 ft. by 24 ft.; platform, 300 ft. by 12 ft., along front, and with end and rear portions.....	2,030 40
		Total.....	15,802 40

Payments.

24. Cash payments equal to about ninety per cent. of the value of the work done, approximately made up from returns of progress measurements and computed at the prices agreed upon or determined under the provisions of this contract, will be made

to the contractor monthly on the written certificate of the engineer that the work for or on account of which the certificate is granted, has been duly executed to his satisfaction, and stating the value of such work computed as above mentioned—and upon approval of such certificate by the Minister, for the time being, and the said certificate and such approval thereof shall be a condition precedent to the right of the contractor to be paid the said ninety per cent. or any part thereof. The remaining ten per cent. shall be retained until the final completion of the whole work to the satisfaction of the Chief Engineer for the time being, having control over the work, and within two months after such completion the remaining ten per cent. will be paid. And it is hereby declared that the written certificate of the said engineer certifying to the final completion of said works to his satisfaction shall be a condition precedent to the right of the contractor to receive or be paid the said remaining ten per cent., or any part thereof.

Monthly Estimates.

25. It is intended that every allowance to which the contractor is fairly entitled will be embraced in the engineer's monthly certificates; but should the contractor at any time have claims of any description which he considers are not included in the progress certificates, it will be necessary for him to make and repeat such claims in writing to the engineer, within fourteen days after the date of each and every certificate in which he alleges such claims to have been omitted.

Claims by Contractor.

26. The contractor, in presenting claims of the kind referred to in the last clause, must accompany them with satisfactory evidence of their accuracy, and the reason why he thinks they should be allowed. Unless such claims are thus made during the progress of the work, within fourteen days, as in the preceding clause, and repeated, in writing, every month, until finally adjusted or rejected, it must be clearly understood that they shall be forever shut out, and the contractor shall have no claim on Her Majesty in respect thereof.

Progress Measurements.

27. The progress measurements and progress certificates shall not in any respect be taken as an acceptance of the work or release of the contractor from responsibility in respect thereof, but he shall at the conclusion of the work deliver over the same in good order, according to the true intent and meaning of this contract.

Operations may be Suspended—Resumed.

28. Her Majesty shall have the right to suspend operations from time to time at any particular point or points or upon the whole of the works, and in the event of such right being exercised so as to cause any delay to the contractor, then an extension of time equal to such delay or detention, to be fixed by the Minister as above provided for, shall be allowed him to complete the contract, but no such delay shall vitiate or avoid this contract or any part thereof or the obligation hereby imposed or any concurrent or other Bond or Security for the performance of this contract, nor shall the contractor be entitled to any claim for damages by reason of any such suspension of operations. And at any time after operations have been suspended either in whole or part—such operations may be again resumed and again suspended, and resumed, as Her Majesty may think proper. And upon the contractor receiving written notice on behalf of Her Majesty that the suspended operations are to be resumed, the contractor shall at once resume the operations and diligently carry on the same.

Appropriation by Parliament.

29. Should the amount now voted by Parliament and applicable towards payment for the work hereby contracted for, be at any time expended previous to the completion of the works, the Minister for the time being may give the contractor written notice to that effect. And upon receiving such notice the contractor may, if he thinks fit, stop the work—but in any case shall not be entitled to any payment for work done, beyond the amount voted and applicable as aforesaid—unless and until the necessary funds shall have been voted by Parliament in that behalf. And in no event shall the contractor have or make any claim upon Her Majesty for any damages or compensation by reason of the said suspension of payment, or by reason of any delay or loss caused by the stoppage of work.

Spirituous Liquors.

30. The contractor shall not permit, allow, or encourage the sale of any spirituous liquors on or near the works.

No Sunday Labour.

31. No work whatever shall at any time or place be carried on during Sunday, and the contractor shall take all necessary steps for preventing any foreman, or agent, or men from working or employing others on that day.

Chief Engineer to be Arbitrator.

32. It is hereby agreed that all matters of difference arising between the parties hereto upon any matter connected with or arising out of this contract, the decision whereof is not hereby especially given to the engineer,—shall be referred to the award and arbitration of the Chief Engineer for the time being having control over the works, and the award of such engineer shall be final and conclusive; and it is hereby declared that such award shall be a condition precedent to the right of the contractor to receive or be paid any sum or sums on account, or by reason of such matters in difference.

33. It is distinctly declared that no implied contract of any kind whatsoever, by or on behalf of Her Majesty, shall arise or be implied from anything in this contract contained, or from any position or situation of the parties at any time, it being clearly understood and agreed upon that the express contracts, covenants and agreements herein contained and made by Her Majesty, are and shall be the only contracts, covenants and agreements upon which any rights against Her are to be founded.

34. This contract is hereby, pursuant to the provisions of the 8th section of the Statute, 41st Victoria (1878), chapter 5, made subject to the express condition that no Member of the House of Commons of Canada shall be admitted to any share or part of such contract, or to any benefit to arise therefrom.

Contract may be Cancelled.

35. In the event of it becoming advisable in the interests of the public to suspend the work hereby contracted for, or any portion thereof, at any time before its completion, and to put an end to this contract, the Minister for the time being shall have full power to stop the work and to cancel this contract, on giving due notice to that effect to the contractor. The contractor, however, will be entitled to receive payment for all sums then due for work already done, materials used or delivered, or ready to be used, or in course of preparation, together with such reasonable compensation as will cover all *bona fide* damages, if any, resulting therefrom, and as may then be agreed upon; or, in case of disagreement, as may be determined by the

Official Arbitrators of the Dominion of Canada; it being understood, however, that no compensation will be allowed to or claimed by the contractor for materials procured for the works, after the date of the service of the notice above referred to, or for any loss of anticipated profits, either in respect of the works so suspended as aforesaid, or of the materials then procured for said works.

IN WITNESS whereof, the contractor hath hereto set his hand and seal and these presents have been signed and sealed by the said Minister, and countersigned by the Secretary of the Department, on behalf of Her Majesty.

Signed, sealed and delivered by the
contractor in presence of
(Signed) JAMES H. ROWAN.

(Signed) R. DICKSON, [L.S.]

Signed, sealed and delivered by the
Minister, and countersigned by the
Secretary, in the presence of
(Signed) H. A. FISSIAULT.

(Signed) CHARLES TUPPER,
Minister of Railways and Canals.
(Signed) F. BRAUN,
Secretary. [L.S.]

SURETIES' INDENTURE.

THIS INDENTURE, made the fifteenth day of August, one thousand eight hundred and seventy-nine, between JOHN McKECHNIE, of Winnipeg, in the Province of Manitoba, and WILLIAM W. McMILLAN, of the same place, carrying on together the business of General Merchants, as partners, under the name, style and firm of "McKechnie & McMillan," and JAMES McLENAGHEN, of Winnipeg, Merchant, in the said Province of Manitoba, hereinafter called "The Sureties," of the first part, and Her Majesty Queen Victoria, of the second part.

WITNESSETH, that the sureties hereby for themselves, and each of them, their and each of their heirs, executors and administrators, jointly and severally, covenant with Her Majesty and Her Successors, that the contractor named in the hereunto annexed Indenture, his executors and administrators, shall and will from time to time, and at all times, well and truly perform, keep and abide by all and singular the covenants, agreements and conditions in said Indenture contained, and on his part to be performed, kept and abided by. And the sureties, further, covenant and agree with Her Majesty and Her Successors, that all the rights, privileges and powers which may, by virtue of the said Indenture, be exercised by or on behalf of Her Majesty, or by the engineer or engineers, or other persons mentioned in said Indenture, may be so exercised without notice to the said sureties, and without in any way releasing or interfering with the liability of the sureties under their covenants herein contained.

In witness whereof, the parties hereto have hereunto set their hands and seals.

Signed, sealed and delivered
in presence of
(Signed) JAMES H. ROWAN.

(Signed) JOHN McKECHNIE. [Seal.]
(Signed) WILLIAM McMILLAN. [Seal.]
(Signed) JAS. McLENAGHEN. [Seal.]

(191.)

ARTICLES OF AGREEMENT entered into this eleventh day of September, in the year one thousand eight hundred and seventy-nine, and made in triplicate between GEORGE THOMAS CLARK, of Dowlais, Wales, sole Trustee under the will of the late Sir John Guest, Baronet, and now carrying on business as manufacturer at Dowlais Steel and Iron Works under the name or firm of "GUEST AND COMPANY" (hereinafter called "the Company"), and HER MAJESTY QUEEN VICTORIA, represented herein by the Honorable SIR CHARLES TUPPER, the Minister of Railways and Canals of Canada, hereinafter called the "Minister," of the second part;

WITNESSETH, that the company, for and in consideration of the conditions and agreements hereinafter mentioned, doth hereby agree to and with Her Majesty, her successors and assigns, to manufacture, supply and deliver, to the satisfaction of the Minister in full and perfect accordance with the terms and agreeably to the true intent and meaning of the specification hereunto annexed marked A, (which is hereby declared and agreed to be part and parcel of this agreement, and to be taken and read as incorporated herewith, and which is hereinafter called the "Specification,") ten thousand tons of steel rails of the standard of the Canadian Pacific Railway (hereinafter called the "Railway," together with such quantity and number of steel fish-plates as may be proportionate and required for laying the said rails on the track of the railway.

And together also with such quantity and number of iron bolts and nuts as may be proportionate to and required for the rails on the track of the said railway. The said delivery of the same respectively to be made as to the first quantity of Five Thousand tons at the option of the company on such wharf at Point Levi, opposite the City of Quebec, or in the City of Montreal, in Canada, and as to the second quantity of Five Thousand tons on such wharf at Point Levi, aforesaid, in bond as the Minister may direct, as follows: Five Thousand tons of the said steel rails, together with the quantity and number of steel fish-plates and of iron bolts and nuts respectively proportionate and requisite for laying the said rails, on or before the first day of October in the present year one thousand eight hundred and seventy-nine. And the balance or remaining quantity of Five Thousand tons of the said steel rails, together with the proportionate quantity and number of steel fish-plates and of iron bolts and nuts respectively proportionate and requisite for laying the said rails, on or before the first day of June in the year one thousand eight hundred and eighty, time being of the essence of this contract. In consideration whereof, Her Majesty's representative as aforesaid doth hereby agree to pay to the company, or their lawful representative, the sum of four pounds seventeen shillings and sixpence for each ton of the said rails for the said quantity of five thousand tons of the said rails firstly hereinbefore mentioned, and the sum of five pounds seventeen shillings and sixpence for each ton of steel fish-plates, and the sum of twelve pounds for each ton of the iron bolts and nuts respectively proportionate and required for the rails firstly hereinbefore mentioned, and the sum of five pounds for each ton of the said rails, for the quantity of five thousand tons of the said rails secondly hereinbefore mentioned, and the sum of six pounds for each ton of steel fish-plates, and the sum of twelve pounds for each ton of the iron bolts and nuts respectively proportionate and required for the rails secondly hereinbefore mentioned, such weight respectively of the said Ten Thousand tons of rails, and of the proportionate and requisite steel fish-plates and iron bolts and nuts hereinbefore mentioned, being two thousand two hundred and forty pounds per ton, the whole being payable as follows, that is to say, eighty per cent or thereabouts of the price of each shipment to be paid to the company, on account of the same, through the Bank of Montreal in the City of London, England, or the Financial or other duly authorized Agent of Canada in England, upon production of Bills of lading of such shipment, and of the policies or documents of insurance thereupon and certificates of the inspection by the Inspector appointed by the Minister for such purpose, and the balance or remaining sum of twenty per cent.

of the full and entire contract price upon the certificate of the Engineer-in-chief of the Railway of the due fulfilment of this contract and agreement, and that the full quantity, quality, and weight of the said rails, fish-plates, bolts and nuts has been delivered in full accordance with the specification and with this agreement upon the appointed wharf in good order and free from cost or expenses of shipping, insurance and freight, in connection with the same; and it is hereby agreed that for the purposes of payment of the balance of twenty per cent. the words "full and entire contract price" in the preceding section contained shall apply to each separate quantity of five thousand tons of rails, fish-plates, iron bolts and nuts proportionate thereto and deliverable on each of the hereinbefore mentioned dates, but shall not in any otherwise vary this contract as one entire contract. Provided, and it is hereby agreed that the acceptance in Canada of any number of tons weight of any shipment of the said rails, fish-plates, iron bolts and nuts and any of them respectively shall not be an acceptance of the whole of the same on any shipment or delivery at Point Levi or Montreal aforesaid, as the case may be, but that the Minister may accept part and reject part of the same respectively, where the same shall not be found to be in accordance with this specification and agreement, and in any such case the amount of payment for the portion so accepted shall be in accordance with the terms of this proviso, and the part so rejected shall be left at the risk, cost and expense of the company.

And it is hereby further agreed upon that the Inspector to be appointed in England by the Minister for such purpose, shall have full power to reject any of the rails, fish-plates, iron bolts and nuts, which in his opinion are not fully, and in all respects conformable to and in accordance with the specification and this agreement.

And further, that for securing the due performance of this agreement by the Company the sum of two thousand five hundred pounds in bank deposit receipts or securities to the cash value of the said sum or security, approved by the Minister or the Financial or other duly authorized Agent of Canada in London, England shall, within ten days hereafter, be deposited in the Bank of Montreal, in London, to the credit of the Finance Minister of Canada, the same to be disposed of by him for making good any default of the company in the due fulfilment of this contract and agreement, but in no cases shall Her Majesty, or the Dominion of Canada, or any Minister, Officer or Agent be liable for any interest on this deposit or for any loss or diminution in the value of such securities.

And it is further agreed that if, from strikes, extraordinary occurrences beyond their control, the company shall be unable to complete the said deliveries, or either of them, within the times respectively specified, a further period not exceeding three months shall be allowed for such in complete delivery, and, thereafter, only such further time as the Minister may, by writing, allow for such purpose.

IN WITNESS whereof, the said George Thomas Clark, acting on behalf of the company, hath hereunto set his hand and affixed the seal of the company, and the Minister hath hereunto set his hand and affixed his seal, and the Secretary of the Department of Railways and Canals of Canada, hath countersigned the same, on the day and year first above written.

Signed, sealed and delivered by
George Thomas Clark, on behalf of
the company, in presence of
(Signed) ALFRED W. HOULSON,
Accountant,
Dowlais Iron Works.

(Signed) GEORGE T. CLARK. (Seal.)

Signed, sealed and delivered by
the Minister of Railways and Canals
of Canada, in the presence of
(Signed) H. A. FISSIAULT.

(Signed) CHARLES TUPPER, (Seal.)
Minister of Railways and Canals.

Countersigned by Frederick Braun,
Esquire, Secretary of Department of
Railways and Canals.

(Signed) F. BRAUN, (Seal.)
Secretary.

The Specification A referred to in the annexed Articles of Agreement.

CANADIAN PACIFIC RAILWAY.

SPECIFICATION

FOR STANDARD STEEL RAILS, 57½ LBS. AND FASTENINGS.

RAILS.

1st.—The rails are to be accurately rolled, uniform throughout, true to template and of the form known as the Canadian Pacific Railway Standard.

2nd.—The steel used for rolling the rails must be of the first quality, such as to secure the best rail manufactured, and best suited for the Canadian climate. The ends are to be cut straight, and perpendicular to the axis of the rail. The head must be perfectly smooth without any defects; the flanges are to be clean, and without chipping. No attempt to improve defective places in the rails after rolling is to be allowed, either by hammering or re-heating; likewise no re-heating shall be allowed for cutting the rails.

The straightening of the rails is to be made when cold by pressure.

Each rail to be distinctly marked on the web with the initial C.P.R steel, the name of maker, and year of manufacture.

3rd. The weight of the rails must be as nearly as possible 57½ lbs. per yard, and every means must be taken to secure this weight. When rolling is commenced, and other times during the process of manufacture, ten rails, perfectly true to section, will be weighed, and if found not corresponding with the required weight, such slight changes in section as necessary to bring the weight to 57½ lbs. per yard must be made.

No rail varying more than one per cent. above or below the normal weight of 57½ lbs. per yard will be accepted, and no payment for over-weight will be made.

4th. The general length of rails will be 30, 28, 26, and 24 feet, but a quantity not exceeding ten per cent. will be received in shorter lengths (22, 20, 19 and 18 feet in about equal proportion), but none under 18 feet lengths. The 19-foot lengths must be specially marked with red paint.

The short rails are not to be rolled purposely, but are to be cut out of such long rails as may have faulty ends. The lengths of the rails are to be as stated above, and no deviation from the exact length to be allowed beyond 3-16ths of an inch, either above or below; or a possible extreme variation of 3-8ths of an inch between two rails, the one being all the allowance too long, the other all the allowance too short.

5th. The rails will be drilled (not punched or punched and enlarged) with two holes near each end. These holes to be elongated 1 inch by ½ inch, as per drawing, the centres of the holes to be 2½ and 7½ inches respectively from ends of rail. Two notches will be slotted in the flange at each end of the rail, with corners rounded, and the whole must be in the positions shewn on drawing.

Every possible care must be taken to render every rail and fastening interchangeable.

6th. The rails will be inspected during the whole course of manufacture by an Engineer or Inspector appointed by the Minister of Railways and Canals of Canada. Such officer shall have liberty to be present in the works at all hours, and will be empowered to reject all rails which, in his opinion, do not come up to the required standard both of form and quality.

Besides accurate external examination, the rails will be subject to the following tests, at the contractors' expense.

One rail out of each 100 tons (or one or more rails taken at random out of each day's make, if so required,) will be chosen and tested as follows:—

a. A portion of the rail placed on supports four feet apart, must stand without fracture a blow from a ball one ton in weight falling from a height of 20 feet.

b. Another portion of the rail, similarly supported, shall be submitted to successive blows from a ball weighing three cwt. from heights of three feet, four feet and five feet, and the respective deflections are not to exceed $\frac{1}{8}$, $\frac{1}{4}$, and $\frac{1}{2}$ inch.

If the first rail taken out of the lot of the 100 tons does not stand the above tests, the lot is to be divided by halves, and one rail of each half (50 tons) tested. If these tests are unsuccessful, the whole lot is to be rejected.

The falling weight test shall be continued until fracture results, and the facts duly recorded and reported.

All the expense of testing is to be borne by the makers. The test to be recorded in the statement signed by the receiving Inspector, and by the Manufacturers' Agent present at the tests. All rejected rails must be painted with white paint on the two ends, and over the letters C.P.R. on the web on both sides. The accepted rails are to be weighed, and each stamped at the ends with the initials of the Inspector.

Steel Fish-plates.

1. The fish-plates are to be of a section to fit the Canadian Pacific standard rail, and of a similar quality of tough mild steel as the rails, and subject to such tests as may be required.

2. A template will be furnished to which two sample plates shall be made, and when approved by the engineer they shall be the standard of finish and weight.

3. They are to be 20 inches long, square at ends, perfectly straight and smooth on every surface, and of uniform section throughout.

4. Each fish-plate must be punched hot with four holes, as shown on drawing. These holes must be clean and true, square through the plate, and exactly in the centre of the width, free from burrs on either side, and perfectly accurate in size and position.

5. Every means must be taken to make the fish-plates uniformly true to template, and exactly according to drawing, so as to fit the rails perfectly and interchangeably.

6. The fish-plates to be dipped to prevent rusting, and then properly secured in bundles of ten in the usual manner, for shipment.

Bolts and Nuts.

1. The bolts $\frac{3}{4}$ in. diameter, $3\frac{1}{2}$ in. long, to be made with cup heads and square necks, in accordance with the drawing. The nuts are to be square.

2. The iron is to be of a tough, fibrous quality, equal to "Best Best Staffordshire," and shall be subject to the approval of the inspecting engineer.

3. The workmanship and finish must be of the best description, great care being taken that the internal faces of the head and nut are exactly square with the axis of the bolt.

4. The bolt heads and necks must be solid. The threads of screws to be "Whitworth's standard," ten to the inch, clearly cut, to fit tightly into the nuts and made so as to hold throughout their entire length.

5. Samples to be submitted to and approved by the inspecting engineer, before the work is commenced, and the whole must be subject to close inspection at all times.

6. The bolts and nuts are to be heated and dipped to prevent rusting, and packed in strong, iron-bound cases, each case to contain not over 2 cwt.

(Signed) SANDFORD FLEMING,

Engineer-in-Chief.

(Signed)

GEORGE T. CLARK.

Witness,

(Signed) ALFRED W. HOULSON.

OTTAWA, July 15th, 1879.

